The 25th World Congress on

Controversies in Obstetrics, Gynecology & Infertility (COGI)

All About Women's Health

In partnership with Reproductive BioMedicine Online (RBMO)

Vienna, Austria

November 30 - December 2, 2017

Congress Program & Abstracts

www.cogi-congress.org • cogi@congressmed.com

Timetable

Thursday, November 30, 2017

	Hall A	Hall B	Hall C	Hall D	Hall E
15:00-16:30	THE BEST RBMO PUBLICATIONS IN 2016-2017: THE EDITOR'S CHOICE	FETAL SURGERY	LASER PRE-COURSE: VAGINAL ERBIUM LASER FOR WOMEN HEALTH		
16:30-18:00	UTERUS TRANSPLANTATION	INFECTIONS DURING PREGNANCY			
18:00-19:00	OPENING SESSION NOBEL PRIZE LAUREATE ROBERT G. EDWARDS ANNUAL LECTURE Partnership of embryonic and extra-embryonic stem cells to build the implanting mammalian embryo in vivo and in vitro				
19:00-20:00	Networking reception				

Friday, December 1, 2017

	Infertility/ART/IVF I	Infertility/ART/IVF II	Gynecology/Menopause/ Family Planning	Fetomaternal	Oral presentations
08:30-10:00	FERTILITY PRESERVATION	NATIONAL SESSION OF THE ASSOCIATION OF GYNECOLOGISTS AND OBSTETRICIANS OF SERBIA, MONTENEGRO AND REPUBLIC OF SRPSKA	MENOPAUSE: DISEASE PREVENTION	PREECLAMPSIA	INFERTILITY/ART/IVF
10:00-10:20	**coffee break**				
10:20-11:50	INDUSTRY-SUPPORTED SYMPOSIUM	ARTIFICIAL GAMETES	NON-MEDICAL OPTIONS TO TREAT VAGINAL ATROPHY	INDUSTRY-SUPPORTED SYMPOSIUM	FETOMATERNAL MEDICINE
11:50-12:10	**break**				
12:10-13:40	INDUSTRY-SUPPORTED SYMPOSIUM	FERTILITY SPARING OPTIONS IN GYNECOLOGIC ONCOLOGY	INDUSTRY-SUPPORTED SYMPOSIUM	PREIS SCHOOL ACADEMY SESSION: THE PROS AND CONS IN THE MANAGEMENT OF PRETERM LABOR	GYNECOLOGY/INFERTILITY
13:40-14:30	**lunch break**				
14:30-16:30	IT'S ALL IN THE CHROMOSOMES?	HEREDITARY GYNECOLOGIC CANCER	BREAST CANCER RISK FROM HORMONAL TREATMENT	SCREENING FOR GESTATIONAL DIABETES – REVISITED	GYNECOLOGY
16:30-16:50	**coffee break**				
16:50-18:20	IMPLANTATION FAILURE	HOT CONTROVERSIES IN IVF, COMMERCIALIZATION, MICRONUTRIENTS, SURGICAL PROCEDURES	OBESITY IS AN INDEPENDENT RISK FACTOR OF MENOPAUSE	FROM NEWBORN TO ADULT HEALTH	FETOMATERNAL MEDICINE

Saturday, December 2, 2017

	Infertility/ART/IVF I	Infertility/ART/IVF II	Gynecology/Menopause/ Family Planning	Fetomaternal	
08:30-10:00	ASSISTED REPRODUCTION: FUTURE PERSPECTIVES	ENDOMETRIOSIS	HPV SCREENING AND SCREENING STRATEGIES	UTERINE NICHE	
10:00-10:20	**coffee break**				
10:20-11:50	TREATMENT OF FIBROIDS	TIME LAPSE	HPV VACCINES: LIGHTS AND SHADOWS	EMERGENCIES IN PERINATOLOGY	
11:50-12:10	**break**				
12:10-13:40	PGS/PGD	SURGICAL SOLUTIONS FOR IMPLANTATION FAILURE	4 METHODS FOR CREATING NEOVAGINA - AND THE WINNER IS…	THROMBOSIS AND BLEEDING	
13:40-14:30	**lunch break**				
14:30-16:30	ROLE OF MITOCHONDRIA IN IVF SUCCESS	ADENOMYOSIS AND FERTILITY	WILL HRT EVER REBOUND TO PRE-WHI?	CONTROVERSIAL ISSUES IN PRETERM BIRTH	
16:30-16:50	**coffee break**				
16:50-18:20	Q&A: PANELIST-AUDIENCE INTERACTION ON ACUTE CLINICAL AND LAB ISSUES	ORAL PRESENTATIONS: INFERTILITY/ART/IVF	OCs COMPLICATIONS: IMPACT ON DEPRESSION AND SUICIDE	CESAREAN SECTION	

Table of Contents

ELSEVIER

Reproductive BioMedicine Online

An international journal devoted to biomedical research on human conception and the welfare of the human embryo

Bart Fauser
Chief Editor

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www.rbmonline.com

Words of Welcome from COGI Chairpersons

Dear Friends and Colleagues,

Welcome to the 25th World Congress on Controversies in Obstetrics, Gynecology & Infertility (COGI) and to the beautiful city of Vienna.

We are proud to announce that COGI and Reproductive BioMedicine Online (RBMO) have entered into a partnership to bring the best publications of the year to COGI.

This year the COGI Organizing Committee has compiled an exciting and educational scientific program, with provocative debates and ample time for speaker-audience discussions, which we believe will lead to meaningful clinical conclusions. We have started a new thought-provoking "countercurrent corner" where leading scientists will offer ideas that go against current beliefs. We are also continuing with the ground-breaking RG Edwards Nobel Prize Laureate lecture, which will be presented by Prof. Magdalena Zernicka-Goetz, who amazed us at the 2016 COGI Amsterdam Congress with her innovative research.

We would like to thank the industry for their ongoing support. It is with this support that we can continue to promote education and disseminate knowledge.

We welcome all our participants who have travelled from over 85 countries to join us for this unique scientific celebration, and we look forward to fruitful discussions and an enjoyable experience together at COGI Vienna 2017.

We invite to join us again next year at the 26th COGI Congress to celebrate 40 years of IVF in London, England, the place where it all began, with the participation of world leaders of now and then.

Sincerely,

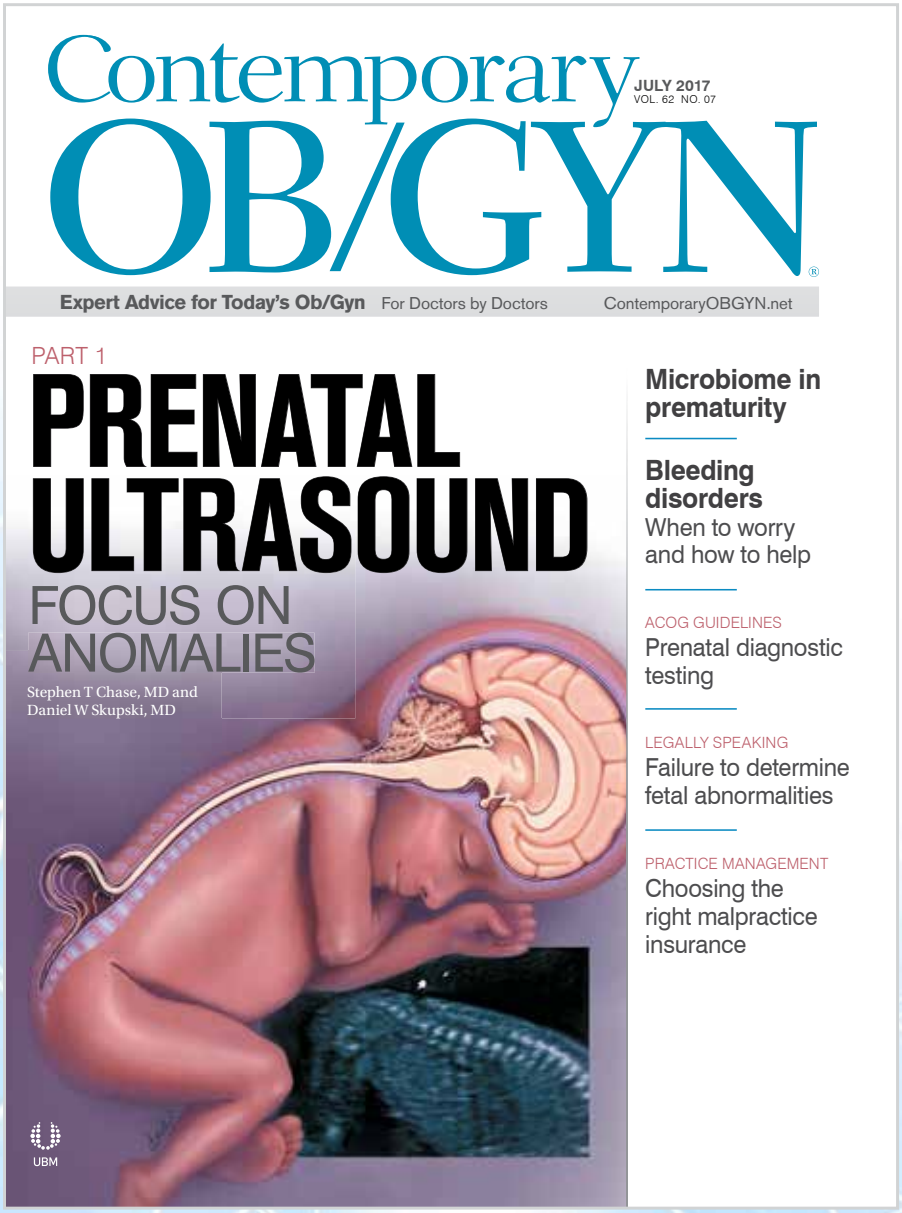
Congress Chairpersons

Zion Ben Rafael
Israel

Christian Egarter
Austria

Bart C.J.M. Fauser
The Netherlands

Rene Frydman
France



Message from Rector MUV I

Dear Colleagues,

On behalf of our University I am very pleased that the 25th World Congress on Controversies in Obstetrics, Gynecology & Infertility takes place in Vienna in 2017, once again. It is a privilege for us to host this well-known congress and I want to warmly welcome you here at the Medical University of Vienna.

Vienna is not only a capital of music but also of academic medicine and is among the top international event locations. The Medical University of Vienna is not only the largest medical institution in Austria, it is also among the top 20 medical research institutions in Europe and provides Europe's largest hospital, the AKH in Vienna with its highly qualified medical staff.

With its 650-year history and tradition the Medical University of Vienna has developed into a modern medical research institution. Internationally competitive medical research and the development of innovative solutions for relevant medical needs such as those covered by this congress are core tasks of our institution.

I sincerely hope that your time in Vienna will enable you to acquire inspiring new contacts, to sustain old friendships and will serve as a fruitful basis for progress in your work.

I wish you inspiring and successful days in Vienna.

Markus Müller

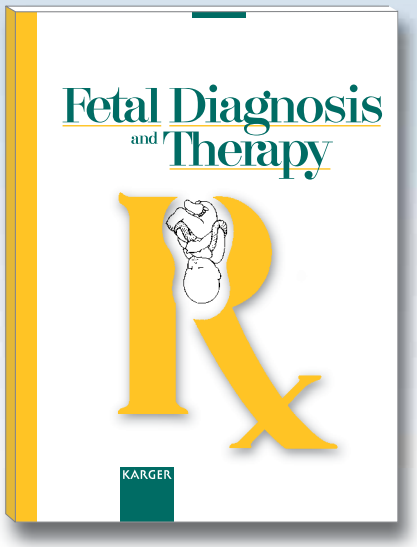
o.Univ. Prof. Dr. Markus Müller
Rector Medical University of Vienna

Gynecology and Obstetrics: from basic research to clinical practice

www.karger.com/goi

Editor-in-Chief
T.M. D'Hooghe, Leuven

Gynecologic and Obstetric Investigation
2017: Volume 82
6 issues per volume
Language: English
ISSN: 0378–7346 (print)
e-ISSN: 1423–002X (online)



www.karger.com/fdt

Editor-in-Chief
E. Gratacós, Barcelona

Fetal Diagnosis and Therapy
2017: Volumes 41, 42
4 issues per volume
Language: English
ISSN 1015–3837 (print)
e-ISSN 1421–9964 (online)

Listed in bibliographic services, including *Journal Citation Reports, PubMed/MEDLINE, Biological Abstracts, Embase*

KARGER

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Message from Mayor & Governor of Vienna

It is really a pleasure to welcome you to the 25th World Congress on Controversies in Obstetrics, Gynecology & Infertility (COGI) in Vienna.

Vienna, also described as Europe's cultural capital, is a metropolis with unique charm, vibrancy and flair. It has all the inspiration that you could wish for in order to discover this wonderful part of Europe.

Vienna is the city of music: Vienna has been synonymous with music for centuries, and was home to Mozart, Beethoven, Schubert and Johann Strauss. This outstanding musical heritage has been preserved right to the present day. The Wiener Philharmoniker is one of the world's top orchestras, the Vienna Boys' Choir is incredibly successful wherever it tours, and the Vienna Conservatorium has produced innumerable international award-winners in all musical disciplines.

Apart from being regarded as the City of Music because of its musical legacy, Vienna is also said to be the "City of Dreams" because it was home to the world`s first psychoanalyst Sigmund Freud, a neurologist who is well known for being one of the greatest interpreters of dreams. Vienna owes its universal appeal to the way it excitingly combines imperial nostalgia with a highly creative cultural scene, responsibly cultivating a precious heritage and charming traditions whilst taking on board the latest trends. Architecture, for instance, dating from imperial times has left an indelible mark on the city. Magnificent edifices, predominantly in baroque, historicism (such as the "Ringstrasse") and art nouveau styles, and the city's grand scale cause you to forget that this is the capital of the small Republic of Austria with only 8.4 million inhabitants.

Down the centuries, Vienna has always produced and nurtured world-famous artists. The collecting passion of art-loving rulers and monarchs has made Vienna a treasure house par excellence. The Museum of Fine Arts, for instance, is one of the world's largest and most distinguished museums, housing priceless works of art. Art accompanies you wherever you go in Vienna.

In recent years Vienna has also established itself as a major player in the world as an international conference destination. The climate of tolerance and understanding creates ideal conditions for international meetings. I wish you an educational, interesting and inspiring event and sincerely hope that you enjoy Vienna.

Dr. Michael Häupl

Mayor and Governor of Vienna

General Information

CONGRESS APP

All participants are invited to download the COGI Congress app, which you can use to view the scientific program, find sessions of interest, create your own program, find and read abstracts, and locate meeting rooms. Download the app from the Apple app store or Google Play.

iPhone Android

VENUE

Hilton Vienna
Am Stadtpark 1, A-1030 Vienna, Austria

LANGUAGE

The official language of the congress in English.

REGISTRATION AND FACULTY DESK OPENING HOURS

Thursday, November 30	12:00-19:00
Friday, December 1	07:30-18:00
Saturday, December 2	08:00-18:00

CONGRESS ADMISSION – NAME BADGE

Admission to the scientific sessions, exhibition area and congress-related events is by name badge only. All participants are kindly requested to carry their personal badge received upon registration at all times while at the congress.

EXHIBITION OPENING HOURS

Thursday, November 30	19:00-20:00
Friday, December 1	08:30-18:20
Saturday, December 2	08:30-18:20

POSTERS

All the posters are presented in electronic format. The stations are located on mezzanine 1 and will be open to all participates on Friday and Saturday during the exhibition hours.

INTERNET

Wireless internet is complimentary in all congress areas.

CERTIFICATE OF ATTENDANCE (non-CME/CPD)

You may collect your certificate of attendance from the registration desk. The certificates will be handed out from Saturday, December 2.

CME ACCREDITATION

The 25th COGI Congress has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) for a maximum of 19 European CME credits (ECMEC®s).
To receive your CME accreditation certificate, please visit the congress website and complete the online form. Your certificate will be sent to you directly following the congress.

REFRESHMENTS

The networking reception will be held on Thursday at 19:00 in the exhibition area.
Coffee and lunch will be served in the exhibition area on Friday and Saturday during the official catering breaks.

SPEAKERS' PREVIEW ROOM

All invited speakers and oral presenters are asked to upload their presentations at the speakers' preview room (mezzanine 1) at least 2 hours before the start of their session. The room will be open during the following hours:

Thursday, November 30	12:00-19:00
Friday, December 1	07:30-18:00
Saturday, December 2	08:00-18:00

CLOAKROOM

The cloakroom is located on the ground floor and will be open during the following hours:

Thursday, November 30	14:30-20:00
Friday, December 1	08:00-18:30
Saturday, December 2	08:00-18:30

SAFETY AND SECURITY

Please do not leave any bags or other personal belongings unattended at any time, whether inside or outside the session halls.

LIABILITY AND INSURANCE

The COGI congress secretariat and the organizers cannot accept liability for personal accidents, or loss or damage to private property of participants, either during or directly arising from the 25th COGI Congress. Participants are advised to make their own arrangements with respect to health and travel insurance.

RECORDING POLICY

Recording (photographic, video and audio) of the sessions is strictly prohibited.

SOCIAL MEDIA

Follow COGI social media pages for the latest updates, key date reminders, and discussions with colleagues and experts from around the world.

- Facebook: COGI Congress
- LinkedIn: Controversies in Obstetrics, Gynecology & Infertility (COGI)
- Twitter: @cogicongress/#COGI
- Youtube: cogicongress

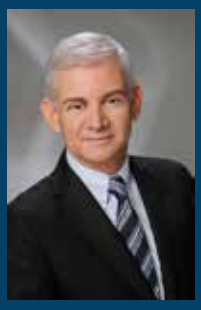
JEPPD | Journal of Endometriosis and Pelvic Pain Disorders

Submit a manuscript

The Journal of Endometriosis and Pelvic Pain Disorders (JEPPD) publishes basic and clinical original research articles and critical reviews focusing specifically on diagnosis, medical and surgical treatment of endometriosis in all its multidimensional aspects. In particular, contributions on the epidemiology of the disease, of its diagnosis and classification, and of its medical, social, psychological and health outcome consequences are welcome. Manuscripts related to uterine disorders and other gynecological and non-gynecological diseases leading to pelvic pain are also a specific focus of the journal.

JEPPD uses a cloud-based manuscript submission and peer-review tracking system to streamline communication between editors, authors and reviewers.

Editor in Chief: Mauricio Abrão
ISSN: 2284-0265
Frequency: 4 issues per year
Website: www.j-endometriosis.com



Submit a manuscript

Submit an article for publication in Journal of Endometriosis and Pelvic Pain Disorders
Go to www.editorialmanager.com/je

WICHTIG

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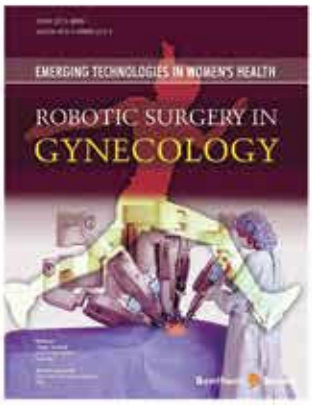
eBooks from Bentham Science

Current Topics in Menopause

eISBN: 978-1-60805-453-4
ISBN: 978-1-60805-515-9
Price US$ 79.00

Editor:
Volodymyr Dvornyk
China

Menopause is a significant event in a woman's life as is generally considered as an indicator for senescence in women. Evidence suggests that menopause results in many psychological and postmenopausal health problems, such as anxiety, osteoporosis, cardiovascular disease, metabolic disorder and others. Menopausal symptoms and associated disorders are of great importance for public health as they influence the quality of life of affected individuals. Therefore proper management of menopause will definitely contribute to healthy aging and the overall well-being of women.



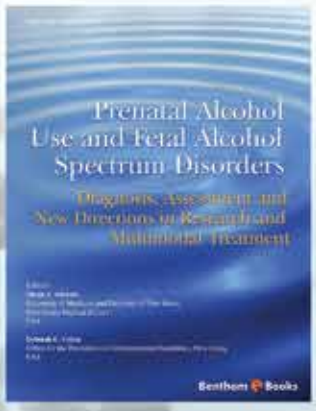
Robotic Surgery in Gynecology Emerging Technologies in Women's Health

eISBN: 978-1-60805-272-1
ISBN: 978-1-60805-574-6
Price US$ 21.00

Editors:
Togas Tulandi
Canada

Arnold Advincula
USA

Emerging Technologies in Women's Health is the first of a series of books dedicated providing updates on rapid advances in new technologies in women's healthcare for researchers and clinicians. This eBook explains techniques of performing minimally invasive robotic surgery in a concise manner. Each chapter is contributed by experts in advanced laparoscopic and robotic surgery and contains several useful line drawn illustrations and photographs. This eBook should be of interest to gynecologic surgeons, fellows and residents.



Prenatal Alcohol Use and Fetal Alcohol Spectrum Disorders: Diagnosis, Assessment and New Directions in Research and Multimodal Treatment

eISBN: 978-1-60805-031-4
ISBN: 978-1-60805-690-3
Price US$ 79.00

Editors:
Susan A. Adubato
USA

Deborah E. Cohen
USA

This ebook addresses the impact of prenatal exposure to alcohol, and Fetal Alcohol Spectrum Disorders (FASD). It presents a compilation of current research by leading experts in the field and serves as a guide to future directions in FASD research, interventions and treatment. The book includes a comprehensive compendium of our knowledge of the dangers of prenatal alcohol exposure and covers ways to screen and intervene with pregnant women, diagnosis and treatment to ameliorate the effects of prenatal alcohol exposure (through the lifespan), and other related issues, such as building a state infrastructure of health services and legislation. The ebook is intended as a textbook for graduate courses relevant to FASD.

COGI

All About Women's Health

Scientific Program

THURSDAY, NOVEMBER 30, 2017

INFERTILITY/ART/IVF		HALL A

15:00-16:30	THE BEST RBMO PUBLICATIONS IN 2016-2017: THE EDITOR'S CHOICE	HALL A
Chairpersons	**Bart Fauser,** The Netherlands **Zion Ben Rafael,** Israel	
15:00-15:10	Introduction **Bart Fauser,** The Netherlands	
15:10-15:35	Women's intentions to use fertility preservation to prevent age-related fertility decline **Anne ter Keurst,** The Netherlands	
15:35-16:00	microRNA miR-200b affects proliferation, invasiveness and stemness of endometriotic cells by targeting ZEB1, ZEB2 and KLF4 **Martin Götte,** Germany	
16:00-16:25	Anti-Müllerian hormone in breast cancer patients treated with chemotherapy: A retrospective evaluation of subsequent pregnancies **Anne-Sophie Hamy,** France	
16:25-16:30	Closing	

16:30-18:00	UTERUS TRANSPLANTATION	HALL A
Capsule	Odyssey through the exciting development of recent years	
Chairpersons	**Mats Brännström,** Sweden **Rene Frydman,** France **Victor Gomel,** Canada	
16:30-16:50	Surgical techniques of live donor uterus transplantation **Pernilla Dahm Kähler,** Sweden	
16:50-17:15	Results of surgery and the first post-transplantation year **Mats Brännström,** Sweden	
17:15-17:35	Obstetric pitfalls and results **Pernilla Dahm Kähler,** Sweden	
17:35-18:00	Bioengineered uterus: The future? **Mats Brännström,** Sweden	

18:00-19:00	OPENING SESSION	HALL A
Chairpersons	**Zion Ben Rafael,** Israel **Bart Fauser,** The Netherlands **Christian Egarter,** Austria *Nobel Prize Laureate Robert G. Edwards annual lecture*	
	Partnership of embryonic and extra-embryonic stem cells to build the implanting mammalian embryo in vivo and in vitro **Magdalena Zernicka-Goetz,** UK	
	Young Scientist Award Ceremony	
19:00-20:00	**NETWORKING RECEPTION**	

THURSDAY, NOVEMBER 30, 2017

FETOMATERNAL MEDICINE — HALL B

15:00-16:30	FETAL SURGERY	HALL B
Capsule	Precise diagnostic tools allow earlier intervention in a large number of anomalies	
Chairpersons	**Gian Carlo Di Renzo,** Italy **Hanns Helmer,** Austria	
15:00-15:20	Diagnosis and treatment of twin-to-twin transfusion syndrome **Christof Worda,** Austria	
15:20-15:45	Treatment of diaphragmatic hernia **Jan Deprest,** Belgium	
15:45-16:05	Fetal cardiac interventions: State of the art **Alberto Galindo,** Spain	
16:05-16:30	Fetoscopic surgery for congenital birth defects: From bench to bedside **Jan Deprest,** Belgium	

16:30-18:00	INFECTIONS DURING PREGNANCY	HALL B
Capsule	Bacterial infections can potentially affect pregnancy from implantation, during pregnancy, through delivery and into the peripartum period. Infections are often asymptomatic, requiring a high degree of awareness and adequate screening	
Chairpersons	**Dan Farine,** Canada **Alberto Galindo,** Spain	
16:30-16:50	Are antibiotics what they used to be? **Dan Farine,** Canada	
16:50-17:15	Strategies for GBS screening, prevention and treatment in the perinatal period (new consensus guidelines) **Gian Carlo Di Renzo,** Italy	
17:15-17:35	Progresses in vaginal microflora physiology and implications for bacterial vaginosis and candidiasis **Gary Ventolini,** USA	
17:35-18:00	Overview of bacterial infections during pregnancy **Bo Jacobsson,** Sweden	

FRIDAY, DECEMBER 1, 2017

INFERTILITY/ART/IVF		HALL A

08:30-10:00	FERTILITY PRESERVATION	HALL A
Capsule	"Cancer patients should be informed of options for fertility preservation and future reproduction prior to cancer treatment" (ASRM). However, many oncologists and gynecologists are not fully aware of the current options and results	
Chairpersons	**Dominique De Ziegler,** France **Claus Yding Andersen,** Denmark	
08:30-08:50	Medical protection of gonadal damage **Marie-Madeleine Dolmans,** Belgium	
08:50-09:15	Ovarian tissue transplantation techniques and results **Jacques Donnez,** Belgium	
09:15-09:40	Ovarian tissue freezing and fertility preservation beyond cancer patients **Claus Yding Andersen,** Denmark	
09:40-10:00	Fertility preservation in BRCA mutation carriers: Ready for prime time? **Edgardo Somigliana,** Italy	
10:00-10:20	**COFFEE BREAK & POSTER VIEWING**	
10:20-11:50	**INDUSTRY SYMPOSIUM** (see page 159)	**HALL A**
11:50-12:10	**BREAK**	
12:10-13:40	**INDUSTRY SYMPOSIUM** (see page 161)	**HALL A**
13:40-14:30	**LUNCH BREAK**	

14:30-16:30	IT'S ALL IN THE CHROMOSOMES?	HALL A
Capsule	We are waking to the fact that the early embryos have tremendous correction mechanisms that complicate the selection process. By germline editing, are we getting closer to the first step in creating the "homo deus"?	
Chairpersons	**Rita Vassena,** Spain **Georg Griesinger,** Germany	
14:30-14:50	The mismeasurement of mosaicism in human embryos **David Albertini,** USA	
14:50-15:15	Chromosome abnormalities can be induced by fertility center practices **Santiago Munné,** USA	

FRIDAY, DECEMBER 1, 2017

15:15-15:35	The pros and cons of aneuploidy embryos transfer **Siobhan Quenby,** UK
15:35-16:00	Human germline gene editing: Are we ready? **Rita Vassena,** Spain
16:00-16:30	**Special COGI-RBMO countercurrent lecture:** Oocyte quality deterioration with age has little to do with chromosomes **David Albertini,** USA
16:30-16:50	**COFFEE BREAK & POSTER VIEWING**
16:50-18:20	**IMPLANTATION FAILURE** **HALL A**
Capsule	Implantation failure is multi-factorial and common. Do we have new understandings and solutions?
Chairpersons	**Rene Frydman,** France **David Albertini,** USA
16:50-17:20	Endometrial cellular senescence and implantation failure **Jan Brosens,** UK
17:20-17:50	Endometrial receptivity: How to assess it and is it key to embryo wastage? **Georg Griesinger,** Germany
17:50-18:20	Diagnosis and treatment of endometrial receptivity **Xavier Santamaria,** Spain

FRIDAY, DECEMBER 1, 2017

INFERTILITY/ART/IVF		HALL B

08:30-10:00	NATIONAL SESSION OF THE ASSOCIATION OF GYNECOLOGISTS AND OBSTETRICIANS OF SERBIA, MONTENEGRO AND REPUBLIC OF SRPSKA	HALL B
Chairpersons	**Aleksandar Stefanović,** Serbia **Katarina Jeremić,** Serbia	
08:30-08:40	Fertility preservation: New approach **Aleksandar Stefanović,** Serbia	
08:40-08:50	Trophoblastic disease: Our experiences **Saša Kadija-Gestational,** Serbia	
08:50-09:00	Malignant ovarian tumors and pregnancy **Rakić Snežana,** Serbia	
09:00-09:10	Preterm birth: Contemporary approach **Vesna Ećim Zlojutro,** Serbia	
09:10-09:20	Hellp syndrome in pregnancy **Miloš Petronijević,** Serbia	
09:20-09:30	Cancer in pregnancy: Need for centralization **Katarina Jeremić,** Serbia	
09:30-09:40	Prenatal diagnosis of congenital heart defects **Svetlana Vrzić Petronijević,** Serbia	
09:40-09:50	Fetal programming in perinatology **Miroslava Gojnić Dugalić,** Serbia	
09:50-10:00	Discussion	
10:00-10:20	**COFFEE BREAK & POSTER VIEWING**	

10:20-11:50	ARTIFICIAL GAMETES	HALL B
Capsule	After many years of research, have we gotten any closer to having artificial gametes?	
Chairpersons	**Norbert Gleicher,** USA **Marie-Madeleine Dolmans,** Belgium	
10:20-10:50	Artificial gamete: Ready for clinical use? **Björn Heindryckx,** Belgium	
10:50-11:20	Artificial ovary **Marie-Madeleine Dolmans,** Belgium	
11:20-11:50	Creation of germ cells is the solution for fertility preservation **Sjoerd Repping,** The Netherlands	
11:50-12:10	**BREAK**	

FRIDAY, DECEMBER 1, 2017

12:10-13:40	FERTILITY SPARING OPTIONS IN GYNECOLOGIC ONCOLOGY	HALL B
Capsule	About 10% of all female cancer survivors are younger than 40 years of age. Cancers affecting female genital organs are usually treated by radical surgery, chemotherapy or chemoradiation approaches, which induce permanent damage to reproductive functions. In young women with new diagnoses of cervical, endometrial or ovarian cancers, viable strategies for fertility preservation without compromising oncological outcome exist and should be considered	
Chairpersons	**Heinz Kölbl,** Austria **Stephan Polterauer,** Austria **Katarina Jeremić,** Serbia	
12:10-12:30	Fertility-sparing surgery in early-stage cervical cancer **Alexander Reinthaller,** Austria	
12:30-12:55	Fertility-sparing management in young endometrial cancer patients **Dominik Denschlag,** Germany	
12:55-13:15	Fertility sparing management of ovarian cancer and borderline tumors **Ignacio Zapardiel,** Spain	
13:15-13:40	Future trends in prevention of ovarian cancer **Joseph Schenker,** Israel	
13:40-14:30	**LUNCH BREAK**	
14:30-16:30	**HEREDITARY GYNECOLOGIC CANCER**	**HALL B**
Capsule	Gynecologists and gynecologic oncologists play a major role in identifying and counselling patients at increased risk of inherited cancer syndromes	
Chairpersons	**Ranjit Manchanda,** UK **Christian Singer,** Austria **Igor Gladchuk,** Ukraine	
14:30-14:50	Hereditary breast cancer **Daphne Gschwantler-Kaulich,** Austria	
14:50-15:15	Hereditary gynecologic cancers **Christoph Grimm,** Austria	
15:15-15:35	Chemoprevention and prophylactic surgery for breast cancer **Georg Pfeiler,** Austria	
15:35-16:00	Chemoprevention and prophylactic surgery for ovarian cancer **Ranjit Manchanda,** UK	

16:00-16:30	**Special COGI-RBMO countercurrent lecture:** Future perspectives in early diagnostic in screening and early diagnostic of epithelial ovarian cancer **Paul Speiser,** Austria
16:30-16:50	**COFFEE BREAK & POSTER VIEWING**
16:50-18:20	**HOT CONTROVERSIES IN IVF, COMMERCIALIZATION, MICRONUTRIENTS, SURGICAL PROCEDURES** **HALL B**
Chairpersons	**Frank Broekmans,** The Netherlands **Norbert Gleicher,** USA
16:50-17:10	Commercialization of unproven technologies in reproductive medicine **Sjoerd Repping,** The Netherlands
17:10-17:35	Clinical aspects of Mayer-Rokitansky-Kuster-Hauser syndrome in the Chinese population: An analysis of 1000+ patients **Hongxin Pan,** China O51 – 1585
17:35-17:55	Changing paradigm for success in ART from PR in fresh cycle towards cumulative PR **Hans-Peter Steiner,** Austria O61-1583
17:55-18:20	The role of micronutrient supplementation in female sterility **Johannes Ott,** Austria

FRIDAY, DECEMBER 1, 2017

GYNECOLOGY/MENOPAUSE/FAMILY PLANNING — HALL C

08:30-10:00	MENOPAUSE: DISEASE PREVENTION	HALL C
Capsule	The debate continues: Can HRT prevent post-menopausal morbidity?	
Chairpersons	**Xiangyan Ruan,** China **Marco Gambacciani,** Italy	
08:30-08:50	HRT: WHI authors claim wrong data interpretation **Alfred Mueck,** Germany	
08:50-09:35	**Debate:** HRT - Cardiovascular risk or prevention? Risk: **Sven Skouby,** Denmark Prevention: **Christian Egarter,** Austria Discussion	
09:35-10:00	HRT: How to prevent and/or treat (uterine) bleeding problems **Alfred Mueck,** Germany	

10:20-11:50	NON-MEDICAL OPTIONS TO TREAT VAGINAL ATROPHY	HALL C
Capsule	The current worldwide laser hype offers treatment for "Atrophic vaginitis" including alleviation of dryness, burning, irritation, sexual symptoms, lack of lubrication and urinary symptoms. What are the proofs? Alleviation?	
Chairpersons	**Irene Lambrinoudaki,** Greece **Marco Gambacciani,** Italy	
10:20-10:50	Non-hormonal options to treat vaginal atrophy: A pathophysiologic perspective **Alessandra Graziottin,** Italy	
10:50-11:20	Vaginal erbium laser for genitourinary syndrome of menopause **Marco Gambacciani,** Italy	
11:20-11:50	Vaginal Lactobacillus: Biofilm formation in vivo – clinical implications **Gary Ventolini,** USA	

12:10-13:40	VULVOVAGINAL PROBLEMS ON THE RISE: ARE WE READY?	HALL C
Chairpersons	**Jorma Paavonen,** Finland **Gilbert Donders,** Belgium	
12:10-12:35	Vulvar vestibulitis syndrome: Conservative management or surgery? **Päivi Tommola,** Finland **Jorma Paavonen,** Finland	
12:35-13:00	Abnormal vaginal microbiome: Is this bacterial vaginosis or aerobic vaginitis? How to develop a pragmatic clinical algorithm **Gilbert Donders,** Belgium	

13:00-13:25	Vulvar dermatoses: Natural history of lichen sclerosus and lichen planus; risk for malignancy **Maija Jakobsson,** Finland	
13:25-13:40	Discussion	
13:40-14:30	**LUNCH BREAK**	
14:30-16:30	**BREAST CANCER RISK FROM HORMONAL TREATMENT**	**HALL C**
Capsule	Is a knee-jerk association of hormonal treatment with breast cancer overstated?	
Chairpersons	**Tommaso Simoncini,** Italy **Santiago Palacios,** Spain	
14:30-14:50	Progestins and breast cancer risk **Ludwig Kiesel,** Germany	
14:50-15:15	How can we reduce the HRT related breast cancer risk? **Marco Gambacciani,** Italy	
15:15-15:35	Impact of different SERMs on breast cancer **Santiago Palacios,** Spain	
15:35-16:00	Progestins and cardiovascular aspects **Christian Egarter,** Austria	
16:00-16:30	**Special countercurrent lecture:** Estrogens protect against breast cancer and can be used in selected cases for the treatment of breast cancer **Herjan Coelingh Bennink,** The Netherlands	
16:30-16:50	**COFFEE BREAK & POSTER VIEWING**	
16:50-18:20	**OBESITY IS AN INDEPENDENT RISK FACTOR OF MENOPAUSE** *In cooperation with the European Menopause and Andropause Society (EMAS)*	**HALL C**
Capsule	Hormonal changes are not necessarily responsible for menopausal weight gain. Other factors such as lifestyle, the right diet and physical activity are important factors in controlling age related and menopausal obesity	
Chairpersons	**Sven Skouby,** Denmark **Alessandra Graziottin,** Italy	
16:50-17:10	Prevention of peri-menopausal obesity by diet and life-style intervention **Irene Lambrinoudaki,** Greece	
17:10-17:35	The implications of fat accumulation during menopause **Tommaso Simoncini,** Italy	
17:35-17:55	Managing obesity: The place of bariatric surgery **Gerhard Prager,** Austria	
17:55-18:20	Exercising during and after menopause: Biological benefits to increase longevity in health **Alessandra Graziottin,** Italy	

FRIDAY, DECEMBER 1, 2017

FETOMATERNAL MEDICINE		HALL D

08:30-10:00	PREECLAMPSIA	HALL D
Capsule	Hypertensive disorders are associated with underlying placental and maternal changes, endothelial dysfunction and vasospasm, leading to placental insufficiency and serious consequences for the mother and infant. But can we agree on the basic etiology?	
Chairpersons	**Aris Antsaklis,** Greece **Julia Binder,** Austria **Harald Zeisler,** Austria	
08:30-08:50	New data on sFlt1/PlGF **Stefan Verlohren,** Germany	
08:50-09:15	Maternal hemodynamics in patients with preeclampsia **Asma Khalil,** UK	
09:15-10:00	**Debate:** Preeclampsia - a cardiac disease? Yes: **Basky Thilaganathan,** UK No: **Annetine Staff,** Norway Discussion	
10:00-10:20	**COFFEE BREAK & POSTER VIEWING**	
10:20-11:50	**INDUSTRY SYMPOSIUM** (see page 160)	**HALL D**
11:50-12:10	**BREAK**	
12:10-13:40	**PREIS SCHOOL ACADEMY SESSION: THE PROS AND CONS IN THE MANAGEMENT OF PRETERM LABOR**	**HALL D**
Chairpersons	**Gian Carlo Di Renzo,** Italy **Hanns Helmer,** Austria	
12:10-12:30	Why prematurity? **Jan Stener Jørgensen,** Denmark	
12:30-12:55	Can we predict and prevent? **Gian Carlo Di Renzo,** Italy	
12:55-13:15	The pillars of the management are evidence-based and safe? **Hanns Helmer,** Austria	
13:15-13:40	Is it worth always postponing preterm labor? The pros and cons **Gerard Visser,** The Netherlands	
13:40-14:30	**LUNCH**	

14:30-16:30	**SCREENING FOR GESTATIONAL DIABETES – REVISITED**	**HALL D**
Capsule	The more we know, the less we understand?	
Chairpersons	**Yariv Yogev,** Israel **Christian Göbl,** Austria	
14:30-15:15	**Debate:** Are screening and diagnosis of gestational diabetes mellitus by IADPSG criteria effective? Yes, screening and diagnosis by IADPSG criteria are effective **Bence Csapo,** Austria No, screening and diagnosis by IADPSG criteria are not effective **Christian Göbl,** Austria Discussion	
15:15-15:35	What evidence is there for testing for gestational diabetes in early pregnancy? **Evelyn Huhn,** Switzerland	
15:35-16:00	Can mathematical models help improve the information derived from the OGTT? **Andrea Tura,** Italy	
16:00-16:30	**Special countercurrent lecture:** The refrain "The answer, my friend, is blowin' in the wind" (Bob Dylan) has been described as "impenetrably ambiguous: Either the answer is so obvious it is right in your face, or the answer is as intangible as the wind". *Wikipedia* Defining good glycemic control – the answer is blowin' in the wind? **Yariv Yogev,** Israel	
16:30-16:50	**COFFEE BREAK & POSTER VIEWING**	
16:50-18:20	**FROM NEWBORN TO ADULT HEALTH**	**HALL D**
Capsule	Primary prevention of chronic diseases and complications through nutrition intervention seems crucial in all disciplines of medicine	
Chairpersons	**Gian Carlo Di Renzo,** Italy **Isaac Blickstein,** Israel	
16:50-17:20	Controversies regarding weight loss in pregnancy **Yariv Yogev,** Israel	
17:20-17:50	The paradigm of hyperglycemia in pregnancy and the possibilities of prevention **Gian Carlo Di Renzo,** Italy	
17:50-18:20	Investing in pregnancy and newborn to boost adolescent-adult health **Gabriella Conti,** UK	

FRIDAY, DECEMBER 1, 2017

ORAL PRESENTATIONS — HALL E

08:30-10:00 ORAL PRESENTATIONS- INFERTILITY/ART/IVF — HALL E

Chairpersons **Emina Ejubovic,** Bosnia and Herzegovina
Giuseppe Tritto, Italy

O65 - 1431
New advances in microsurgery of male infertility. Testis expandable biosurgery and microsurgery
Giuseppe Tritto, Italy

O25 - 1071
The relationship between the preovulatory and postovulatory progesterone serum concentration and the outcome of the in vitro fertilization – a pilot study
Emina Ejubovic, Bosnia and Herzegovina

O06 – 1374
Assessment of ovarian reserve tests for prediction of oocyte yield and chance of pregnancy after ovulation induction
Ludmila Barbakadze, Georgia

O13 – 1178
Galectin-3 levels and DNA fragmentation index in ejaculated spermatazoa of men with infertility
Gamze Sinem Caglar, Turkey

O17 – 1443
An evaluation of ovarian response and pregnancy rates with the use of growth hormone as an adjunct to IVF in poor responders with AMH as biomarker
Mohamed Tasneem, South Africa

O24 – 1034
The effects of follicular fluid and serum 25- hydroxy vitamin D (25OH-D) levels on IVF/ ICSI cycles outcomes; a prospective cohort STUDY
Mahbod Ebrahimi, Iraq

O33 - 1350
How much dominant follicles should be induced to achieve a good quality embryo among poor responders during COH for IVF-ET? A retrospective study
Serkan Kahyaoglu, Turkey

O67 – 1092
Higher levels of follicular fluid sRAGE predict a better ovarian reserve and better IVF-ET pregnancy outcomes
BiJun Wang, China

O41 – 1524
Serum bisphenol A (BPA) concentration in pregnant women and umbilical cord and its impact on testis development and function of their male newborns
Monika Lukasiewicz, Poland

O43 - 1059
Emotional intelligence in women undergoing infertility treatment: Is there a relation with etiology of infertility?
Fahimeh Mollaahmadi, Iran

O45 - 1205
Risk factors for unexpected follicular stagnation and treatment outcome with LH supplementation
Sezcan Mumusoglu, Turkey

O44 – 1060
Congenital malformations in newborns after ART
Fahimeh Mollaahmadi, Iran

10:00-10:20 COFFEE BREAK & POSTER VIEWING

10:20-11:50 ORAL PRESENTATIONS - FETOMATERNAL MEDICINE HALL E

Chairpersons **Aris Antsaklis,** Greece
Carla Peixoto, Portugal

O52 - 1376
Cervical length measurement in non-pregnant women – are we over diagnosing short cervix in pregnancy?
Carla Peixoto, Portugal

O05 – 1285
Mifepristone as a method of choice for cervical ripening in comparison with Foley's catheter and laminaria sticks
Margarita Bakleicheva, Russia

O09 - 1149
Pregnancy outcomes in inflammatory bowel disease - a retrospective study
Sara Bernardes da Cunha, Portugal

O07 - 1343
Polymorphism of IL-1β, TNF-α, IL-1Ra, IL-4 cytokine genes in pathogeneses of preterm delivery
Vera Belousova, Russia

O12 – 1333
The effect of early skin to skin contact on neonatal compliance and breastfeeding success in preterm labory
Nuriye Büyükkayacı Duman, Turkey

O16 - 1287
The use of sildenafil in early onset intrauterine growth restriction
Olivia Anne Cassar, Malta

O19 - 1394
Use of misoprostol in the pregnancy termination in the second trimester in women with previous caesarean section
Saimir Cenameri, Albania

O22 - 1329
Estimation of placental kisspeptin level in preeclamptic pregnancies
Anna Drobintseva, Russia

FRIDAY, DECEMBER 1, 2017

O26 – 1458
How reliable are WBC count and CRP to monitor for intra-amnionic infection?
Aulona Gaba, Austria

O37 - 1444
Abdomino-pelvic packing revisited: An overlooked technique for managing intractable obstetric hemorrhage
Allen Lavina, UK

O42 – 1401
Pregnancy outcome after recent laparoscopic myomectomy – a case report
Matilde Martins, Portugal

O62 - 1082
A rare life-threatening complication in early pregnancy
Fatima Taki, UK

11:50-12:10 BREAK

12:10-13:40 ORAL PRESENTATIONS - GYNECOLOGY/INFERTILITY HALL E

Chairpersons **Gary Ventolini,** USA
Marco Noventa, Italy

O46 - 1240
Effects of autologous platelet-rich plasma on endometrial expansion in patients undergoing frozen-thawed embryo transfer: A double blind randomized sham-controlled trial
Leila Nazari, Iran

O47 - 1550
Ultrasound guided embryo transfer: Summary of evidences to close the open debate and unlock new perspectives. Literature review and meta-analysis
Marco Noventa, Italy

O48 - 1248
Elevated level of Afamin and lipid dysregulation in seminal and follicular fluids could be related with male and female infertility
Rocío Nuñez-Calonge, Spain

O59 – 1472
Does bariatric surgery improve assisted reproductive technology outcomes in obese infertile women?
Loredana Maria Sosa Fernandez, Italy

O36 – 1512
Metabolites profiling in culture mediums of day-5 human embryos
Elena Kulakova, Russia

O32 – 1530
Should be 3D SIS performed prior to hysteroscopy in patients with endometrial changes?
Zaklina Jurisic, Serbia

O38 – 1110
Study on apoptosis of neurons in mouse cerebrum by using tunnel and expression of caspase3, 9 after live three-dimensional ultrasound radiation
Jianhui Li, China

O60 - 1084
Biosignals: The way of controlling the emotional state during infertility treatments
Joana Sousa, Portugal

O18 – 1502
The effects of HIV infection and antiretroviral therapy on ovarian reserve and IVF success
Cassim Mohamed Iqbal, South Africa

O58 – 1276
Secondary amenorrhea as a symptom of hereditary hemochromatosis (HH)
Ida Marija Šola, Croatia

O66 - 1297
Does HPV vaccination affect sexual behavior in adolescent and young women?
Anastasia Vatopoulou, Greece

O68 – 1464
Health beliefs of university students about human papilloma virus infection and vaccination
Ruken Yağız, Turkey

13:40-14:30 **LUNCH BREAK**

14:30-16:30 **ORAL PRESENTATIONS - GYNECOLOGY** **HALL E**

Chairpersons **Andrea Weghofer,** Austria
Agung Dewanto, Indonesia

O04 – 1368
The role of cell proliferation in the invasion process of endometrioma in chick chorioallantoic membrane: A preliminary study
Regina Arumsari, Indonesia

O21 – 1335
Comparison of invasion process of peritoneal endometriosis and endometrioma tissue in chick chorioallantoic membrane: A preliminary study
Agung Dewanto, Indonesia

O28 – 1212
Contraception counseling project for women attending a gynecology clinic in Turkey: Does it work?
Funda Gungor Ugurlucan, Turkey

O34 – 1341
Beneficial effects of onion and cinnamon on sex hormones and serum antioxidant capacity in female rats exposed to power frequency electric and magnetic fields
Arash Khaki, Iran

FRIDAY, DECEMBER 1, 2017

P36 - 1088
Denosumab and cancer cell migration
Serge Ginter, Luxembourg

O29 – 1162
Case reports of different malignant GTN with similar ultrasound appearance
Bojana Ivic, Serbia

O35 - 1247
Comparison of surgical techniques for treatment of submucosal myoma
Vera Korennaya, Russia

O39 - 1457
Outcomes of colorectal anastomoses during operation for gynecologic malignancy
Sang Woo Lim, South Korea

O54 - 1409
Experience of sigmoid colon vaginoplasty in vaginal agenesis with failure of previous surgical procedures
Muhammad Nurhadi Rahman, Indonesia

O40 – 1572
Roma women - an insight on their standpoints regarding reproductive health
Marjeta Logar Čuček, Slovenia

O20 - 1310
The evaluation of the use of complementary alternative medicine (CAM), symptom severity and quality of life in menopausal women: Turkish samples
Dilek Coşkuner Potur, Turkey

O02 - 1257
Attitudes and related factors about family planning methods of refugee women in Turkey
Hacer Alan Dikmen, Turkey

O55 - 1096
Comparison of sufficient and insufficient vitamin D in treatment of infertile PCOS patients
Athar Rasekh Jahromi, Iran

16:30-16:50 COFFEE BREAK & POSTER VIEWING

16:50-18:20 ORAL PRESENTATIONS - FETOMATERNAL MEDICINE HALL E

Chairperson **Asli Sis Celik,** Turkey

O49 – 1478
Placental microRNA expression in pregnancies complicated by gestational diabetes mellitus and preeclampsia
Vladimir Pakin, Russia

O53 – 1400
Stillbirth analysis: A 10-year retrospective study in a Portuguese maternity
Ana Portela Carvalho, Portugal

O57 – 1531
The rates of preconception care in Turkish pregnant women, affecting factors and the quality of care
Asli Sis Celik, Turkey

O64 – 1262
The role of renin-angiotensin genes polymorphisms in the etiology of early and late PE
Elena Timokhina, Russia

O71 – 1223
Surgical management of incompetent cesarean scar in pregnancy – it is a new obstetrical problem
Nikolay Zharkin, Russia

O01 - 1518
Case report: Postpartum symphiliosis, periureteral laceration, and perineal rupture after vaginal delivery with shoulder dystocia
Dedy Aria Aditia, Indonesia

O14 - 1213
Problems experienced by obese pregnant women in third-trimester and effects of obesity on quality of life
Ruveyde Can, Turkey

O15 – 1159
Traumatic births affect both mother and newborn negatively, for sure; what about midwife? A literature gap in turkey!!!
Seyhan Cankaya, Turkey

O30 – 1313
Risk factors for pregnancy-associated venous thromboembolism in a multi-ethnic Asian population
Sandra Jaya-Bodestyne, Singapore

O69 - 1227
The investigation of nurses' self-efficacy perceptions with problem-solving abilities
Mine Yilmaz Kocak, Turkey

O70 - 1289
Midwifery students' information level and attitudes towards lesbians and gay males in Turkey
Sema Dereli Yilmaz, Turkey

O72 - 1304
The effect of vitamin B1 on the change of appetite related to premenstrual syndrome in young women
Sareh Abdollahifard, Iran

SATURDAY, DECEMBER 2, 2017

INFERTILITY/ART/IVF		HALL A

08:30-10:00	ASSISTED REPRODUCTION: FUTURE PERSPECTIVES	HALL A
Capsule	Individualization of stimulation, "freeze all" and social freezing are flowing into our discipline and, as usual, stirring considerable controversies	
Chairpersons	**Bart Fauser,** The Netherlands **Zion Ben Rafael,** Israel **Andrea Weghofer,** Austria	
08:30-09:15	**Debate:** Individualized stimulation: The way to go or an unnecessary effort? Pro: **Dominique de Ziegler,** France Con: **Frank Broekmans,** The Netherlands Discussion	
09:15-09:35	The dilemma of social freezing: "Houston we have a problem" **Zion Ben Rafael,** Israel	
09:35-10:00	The "freeze all" concept in assisted reproduction: An option for everyone? **Andrea Weghofer,** Austria	
10:00-10:20	**COFFEE BREAK & POSTER VIEWING**	
10:20-11:50	**TREATMENT OF FIBROIDS**	**HALL A**
Capsule	The incidence of infertility and uterine fibroids increases with women's increasing age, and so does the association between the two. Non-surgical solutions diversify the doctor's and patient's choices	
Chairpersons	**Christian Egarter,** Austria **Bart Fauser,** The Netherlands	
10:20-10:40	SPRM: Mode of action and latest recommendations **Christian Egarter,** Austria	
10:40-11:05	Fibroids and infertility **Kazem Nouri,** Austria	
11:05-11:50	**Debate:** Current management of UF: Surgery or medical treatment for ALL? Surgical management for ALL: **Attilio di Spiezio Sardo**, Italy Medical management for ALL: **Josep Estadella Tarriel,** Spain Discussion	
11:50-12:10	**BREAK**	

12:10-13:40	**PGS/PGD** *In collaboration with the Hungarian Human Reproduction Society (HHRS)*	**HALL A**
Capsule	While the technique seems to be improving, the question now is can universal PGS improve the results of ART or worsen them?	
Chairpersons	**Attila Vereczkey,** Hungary **Elpida Fragouli,** UK **David Albertini,** USA	
12:10-12:55	**Debate:** PGS All embryos should be tested: **Simon Fishel,** UK No embryos should be tested: **Norbert Gleicher,** USA Discussion	
12:55-13:40	**Debate:** Detection of mosaicism in trophectoderm biopsies For: **Nathan Treff,** USA Against: **Antonio Capalbo,** Italy Discussion	
13:40-14:30	**LUNCH BREAK**	
14:30-16:30	**ROLE OF MITOCHONDRIA IN IVF SUCCESS**	**HALL A**
Capsule	Mitochondria, the only (animal) organelles containing DNA outside of the nucleus, are essential for normal fertilization and embryonic development; can they serve as biomarkers for implantation?	
Chairpersons	**Rene Frydman,** France **Norbert Gleicher,** USA	
14:30-14:50	Mitochondrial DNA (mtDNA) can serve as a biomarker of pre-implantation embryo viability **Elpida Fragouli,** UK	
14:50-15:15	Mitochondria as a biomarker for implantation **Nathan Treff,** USA	
15:15-15:35	PGS on culture media **Wilfried Feichtinger,** Austria	
15:35-16:00	Detection pregnancy potential of mosaic embryos **Santiago Munné,** USA	
16:00-16:30	**Special COGI-RBMO countercurrent lecture:** *Mitochondria are prone to DNA mutations due to the lack of protective histones. Boasting mitochondrial function are used to rejuvenate older age oocytes. Where is the proof?* Boosting mitochondrial function in oocytes increases success: No proof has yet been provided **Simon Fishel,** UK	
16:30-16:50	**COFFEE BREAK & POSTER VIEWING**	

SATURDAY, DECEMBER 2, 2017

16:50-18:20	Q & A	HALL A

Capsule: Panelist-audience interaction on acute clinical and lab issues

Chairpersons:
Zion Ben Rafael, Israel
Rene Frydman, France

Panelists:
Wilfried Feichtinger, Austria
Simon Fishel, UK
Sjoerd Repping, The Netherlands
Basil Tarlatzis, Greece
Nathan Treff, USA

Repeated bad quality embryos? Is it the lab or stimulation?
What to do with RIF?
Time-lapse
POR: Individualization of treatment; how?
Hysteroscopy to all before IVF or by indication?
PCOS: Individualization of treatment; how?
ICSI to all or by indication
Evidence-based luteal support: What, when and for how long?
Severe Asherman: What is the solution? Surgical? Stem Cells?
Mosaicism: What is the incidence? Why do some PGS labs report mosaicism and others not?
Should mosaic embryos be transferred? What are the risks to the new-born and the practitioners responsible for their transfer?

SATURDAY, DECEMBER 2, 2017

INFERTILITY/ART/IVF **HALL B**

08:30-10:00	**ENDOMETRIOSIS**	**HALL B**
Capsule	Many basic questions regarding the treatment of endometriosis remain unanswered	
Chairpersons	**Mark Hans Emanuel,** The Netherlands **Gab Kovacs,** Australia **Leila Adamyan,** Russia	
08:30-08:50	Deep Endometriosis: Back to less aggressive surgery? **Jacques Donnez,** Belgium	
08:50-09:35	**Debate:** Endometrioma before IVF surgery or puncture? Surgical removal first: **Jacques Donnez,** Belgium Conservative therapy including puncture first: **Kazem Nouri,** Austria Discussion	
09:35-10:00	Diagnosis of endometriosis: What is new? **Leila Adamyan,** Russia	
10:00-10:20	**COFFEE BREAK & POSTER VIEWING**	
10:20-11:50	**TIME LAPSE**	**HALL B**
Capsule	Time lapse seems like the right tool to close the gaps between the limited examination performed in the IVF laboratory and the dynamic nature of embryonic growth. Continuous monitoring offers information on positive and negative events. Time lapse also offers a list of secondary advantages, but does it allow for automatic embryo selection?	
Chairpersons	**Elpida Fragouli,** UK **Norbert Gleicher,** USA **Mattheos Fraidakis,** Greece	
10:20-10:40	Time lapse to optimize embryo culture: First step towards automation in IVF **Laura Rienzi,** Italy	
10:40-11:25	**Debate:** Time lapse: What have we learned so far? Do universal algorithms work? No: **Rita Vassena,** Spain Yes: **Thomas Ebner,** Austria **Discussion**	
11:25-11:50	Embryo development on day 3-4: What can we learn? **Rita Vassena,** Spain	
11:50-12:10	**BREAK**	

SATURDAY, DECEMBER 2, 2017

12:10-13:40	**SURGICAL SOLUTIONS FOR IMPLANTATION FAILURE**	**HALL B**
Capsule	What proof do we have to support the endometrial surgical procedures to enhance implantation?	
Chairpersons	**Kazem Nouri,** Austria **Victor Gomel,** Canada **Eero Varila,** Finland	
12:10-12:30	Endometrial scratching prior to ART is being routinely used in many centers, but it is too controversial to be routine **Mark Hans Emanuel,** The Netherlands	
12:30-12:55	Can we make the endometrium more receptive? **Gab Kovacs,** Australia	
12:55-13:40	**Debate:** Does treating thin endometrium and Asherman syndrome require surgery or stem cells? Proposition: Stem cells for thin endometrium and Asherman syndrome **Xavier Santamaria,** Spain Opposition: You don't need stem cells; you need good surgeons **Mark Hans Emanuel,** The Netherlands Discussion	
13:40-14:30	**LUNCH BREAK**	
14:30-16:30	**ADENOMYOSIS AND FERTILITY** *In collaboration with the Turkish Society of Reproductive Medicine*	**HALL B**
Chairpersons	**Ahmet Zeki Işık,** Turkey **Baris Ata,** Turkey	
14:30-15:00	Is vaginal ultrasound all you need to diagnose adenomyosis? **Baris Ata,** Turkey	
15:00-15:30	How can surgery improve fertility in adenomyosis? The right procedure for the right patient **Erbil Dogan,** Turkey	
15:30-16:00	How to improve assisted reproductive technology outcome for women with adenomyosis **Gurkan Bozdag,** Turkey	
16:00-16:30	Pregnancy outcome in women with adenomyosis **Esra Kılıçdağ,** Turkey	
16:30-16:50	**COFFEE BREAK & POSTER VIEWING**	

16:50-18:20	ORAL PRESENTATIONS - INFERTILITY/ART/IVF	HALL B

Chairpersons **Victor Gomel,** Canada
Pierluigi Benedetti Panici, Italy

O11 - 1353
EVA - a randomized controlled trial of lateral episiotomy versus no episiotomy in vacuum assisted delivery-implementation challenges
Sophia Brismar Wendel, Sweden

O08 – 1582
Accuracy of pelvic ultrasound in preoperative evaluation of uterine myomas: A prospective cohort study
Pierluigi Benedetti Panici, Italy

O50 – 1584
Laparoscopic peritoneal vaginoplasty (Luohu II Procedure) in MRKH syndrome: 10 years' experience in 885 patients
Hongxin Pan, China

O03 – 1370
Medication therapy for uterine fibroids: An alternative to surgery
Margarita Andreeva, Russia

O31 – 1495
Is Ulipristal effective in treatment of uterine fibroids?
Aleksandar Jurisic, Serbia

O23 - 1562
Validation of an augmented reality ultrasound app – UPPS (Ultrasound aPP Study)
Florian Ebner, Germany

O63 – 1099
Micro volume freezing of human spermatozoa with minimal non-permeable cryoprotectant by using cryotop
Van Tang, Vietnam

O56 - 1461
Knowledge and technology transfer of expandable squem techniques in microsurgery of male infertility from high-cost to low-cost clinical hubs
Arben Rrugia, Italy

O27 - 1087
Low dose aspirin and wellageing
Serge Ginter, Luxembourg

O10 - 1067
Tri-nucleotide consortium of androgen receptor associated with retrogressive sperm motility
Shahzad Bhatti, Pakistan

SATURDAY, DECEMBER 2, 2017

GYNECOLOGY/MENOPAUSE/FAMILY PLANNING — HALL C

08:30-10:00	**HPV SCREENING AND SCREENING STRATEGIES**	**HALL C**
Capsule	Most European recommendations support the adoption of validated HPV tests as the stand-alone primary screening tool. Coordinated strategies of screening and vaccination are the subject of intense research and evaluation	
Chairpersons	**F. Xavier Bosch,** Spain **Thomas Iftner,** Germany	
08:30-09:00	Tests for HPV screening: Clinical validation **Thomas Iftner,** Germany	
09:00-09:30	Guidelines for HPV screening in Europe **Mario Poljak,** Slovenia	
09:30-09:50	The need for coordinated programs of vaccination and screening **F. Xavier Bosch,** Spain	
09:50-10:00	Discussion: The impact of HPV screening in the re-organization of health services	
10:00-10:20	**COFFEE BREAK & POSTER VIEWING**	
10:20-12:05	**HPV VACCINES: LIGHTS AND SHADOWS**	**HALL C**
Capsule	Despite massive data confirming the effectiveness and safety of HPV vaccines, some vaccination programs in the world have been challenged by non-scientifically supported claims of side effects	
Chairpersons	**F. Xavier Bosch,** Spain **Elmar Joura,** Austria	
10:20-10:45	The adoption of HPV vaccines in the world and the axis of assessment of vaccine safety **F. Xavier Bosch,** Spain	
10:45-11:10	The promises of the second-generation HPV vaccines **Elmar Joura,** Austria	
11:10-11:35	Vaccine confidence and vaccine hesitancy: The case in Denmark **Susanne Krüger Kjaer,** Denmark	
11:35-11:50	Discussion: The role of the gynecologists in HPV vaccination	
11:50-12:05	**Oral abstract contribution to the panel:** A novel HPV detection method **Changping Zou,** USA	
12:05-12:10	**BREAK**	

12:10-13:40	**4 METHODS FOR CREATING NEOVAGINA - AND THE WINNER IS…** *In cooperation with the International Federation of Infant and Juvenile Gynecology (FIGIJ)*	**HALL C**
Capsule	Neovagina is a dramatic surgery for the adolescent. Innovative choices may ease the experience	
Chairpersons	**George K. Creatsas,** Greece **Pierluigi Benedetti Panici,** Italy **Gabriele Tridenti,** Italy	
12:10-12:30	Neovagina using autologous cultured vagina tissue **Pierluigi Benedetti Panici,** Italy	
12:30-12:55	Vulvovaginoplasty **George K. Creatsas,** Greece	
12:55-13:20	Creation of a neovagina by Davydov's laparoscopic modified technique patients with Rokitansky syndrome **Leila Adamyan,** Russia	
13:20-13:40	Luohu procedure in female genital tract congenital malformation (the experience based on 1000+ vaginoplasty) **Guangnan Luo,** China	
13:40-14:30	**LUNCH BREAK**	
14:30-16:30	**WILL HRT EVER REBOUND TO PRE-WHI?**	**HALL C**
Capsule	15 years after WHI, is it still possible that without a paradigm shift the HRT will never rebound to its previous level?	
Chairpersons	**Andrea R. Genazzani,** Italy **Christian Egarter,** Austria	
14:30-15:15	**Debate:** HRT: Have the risks been overestimated? Will it rebound to the pre-WHI era? Yes: **Tommaso Simoncini,** Italy No: **Sven Skouby,** Denmark Discussion	
15:15-16:00	**Debate:** Vaginal application of sex steroids: The future in women's health? Yes: **Andrea R. Genazzani,** Italy No: **Alessandra Graziottin,** Italy Discussion	
16:00-16:30	**Special countercurrent lecture:** Ovarian tissue re-implantation: The HRT of the future? **Jacques Donnez,** Belgium	
16:30-16:50	**COFFEE BREAK & POSTER VIEWING**	

SATURDAY, DECEMBER 2, 2017

16:50-18:20	OCs COMPLICATIONS: IMPACT ON DEPRESSION AND SUICIDE	HALL C
Capsule	Did we miss or downplay the risks and complications of OCs?	
Chairpersons	**Santiago Palacios,** Spain **Mireille Merckx**, Belgium	
16:50-17:10	Contraceptives and thrombotic risks: What is the true risk? **Sven Skouby,** Denmark	
17:10-17:55	**Debate:** Is depression a major or a minor side effect? Yes, depression is a major side effect: **Øjvind Lidegaard,** Denmark No, depression is not a major side effect: TBA Discussion	
17:55-18:20	OCs and sexual dysfunction TBA	

SATURDAY, DECEMBER 2, 2017

FETOMATERNAL MEDICINE		HALL D
08:30-10:00	**UTERINE NICHE**	**HALL D**
Chairpersons	**Isaac Blickstein,** Israel **Aris Antsaklis,** Greece	
Capsule	High rate of cesarean sectioning increases the chances to encounter scar defects in future pregnancy. Should it be treated first?	
08:30-08:50	Cesarean scar pregnancy **Samir Helmy-Bader,** Austria	
08:50-09:35	**Debate:** Surgical management of cesarean scar defect (Niche) before further fertility Yes: **Julian Marschalek,** Austria No: **Heinrich Husslein,** Austria Discussion	
09:35-10:00	The golden minute of twin B **Isaac Blickstein,** Israel	
10:00-10:20	**COFFEE BREAK & POSTER VIEWING**	
10:20-11:50	**EMERGENCIES IN PERINATOLOGY**	**HALL D**
Capsule	Life threatening conditions of pregnancy must be treated	
Chairpersons	**Gerard Visser,** The Netherlands **Peter Husslein,** Austria	
10:20-10:50	Amniotic fluid emboli: Radical change in our outlook **Dan Farine,** Canada	
10:50-11:20	Intrapartum emergencies in twin births **Isaac Blickstein,** Israel	
11:20-11:50	CIN 2-3 in pregnancy: Observation or LLETZ in first trimester **Efraim Siegler,** Israel	
11:50-12:10	**BREAK**	

SATURDAY, DECEMBER 2, 2017

12:10-13:40	**THROMBOSIS AND BLEEDING**	**HALL D**
Capsule	Thrombosis and bleeding result in emergency situations that ought to be prevented	
Chairpersons	**Peter Husslein,** Austria **Petra Pateisky,** Austria	
12:10-12:30	Management option for suspected placenta accreta **Dieter Bettelheim,** Austria	
12:30-12:55	Universal post-partum thromboprophylaxis? **Dorit Blickstein,** Israel	
12:55-13:15	Midwife deliveries in a university clinic setting **Peter Husslein,** Austria	
13:15-13:40	FIGO guidelines for PPH **Dan Farine,** Canada	
13:40-14:30	**LUNCH BREAK**	
14:30-16:30	**CONTROVERSIAL ISSUES IN PRETERM BIRTH**	**HALL D**
Capsule	The two major common risks of pregnancy are associated. Do we have a new understanding?	
Chairpersons	**Isaac Blickstein,** Israel **Basky Thilaganathan,** UK	
14:30-14:50	Preeclampsia and fetal congenital heart defects **Julia Binder,** Austria	
14:50-15:15	The long-term cardiovascular consequences of SGA **Lila Seidl-Mlczoch,** Austria	
15:15-16:00	**Debate:** Steroids for late preterm birth? Yes: **Dan Farine,** Canada No: **Gerard Visser,** The Netherlands Discussion	
16:00-16:30	**Special countercurrent lecture:** Alternative means to arrest premature contractions? Using blue light suppresses melatonin and acute preterm contractions and birth **James Olcese,** USA	
16:30-10:50	**COFFEE BREAK & POSTER VIEWING**	

16:50-18:20	CESAREAN SECTION	HALL D
Capsule	The high rate of CS causes secondary problems and raises questions that have to be addressed	
Chairpersons	**Isaac Blickstein,** Israel **Heinrich Husslein,** Austria	
16:50-17:35	**Debate:** Is there a minimal advised period before conception after C-section? Proposition: Wait 6 or 12 months before pregnancy **Gerard Visser,** The Netherlands Opposition: No time limit before new pregnancy after CS **Martin Langer,** Austria Discussion	
17:35-18:20	**Debate:** Induction of labor decreases the CS rate Yes, induction of labor decreases CS rate: **Aris Antsaklis,** Greece No, induction of labor increases CS rate: **Martin Langer,** Austria Discussion	

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Abstracts

INVITED SPEAKERS' ABSTRACTS

CREATION OF A NEOVAGINA BY DAVYDOV'S LAPAROSCOPIC MODIFIED TECHNIQUE IN PATIENTS WITH ROKITANSKY SYNDROME (NEW POSSIBILITIES)

L.V. Adamyan, A.S. Arakelyan, Russian Federation

Multiple successful methods of neovagina creation are currently used. The pearls for minimizing complications and providing maximal results for the surgeon employing a laparoscopic-assisted peritoneal colpopoesis technique were described. Laparoscopic- assisted peritoneal colpopoesis has proven to be reliable and effective method of neovagina creation associated with minimal morbidity and excellent functional and anatomical results. It can be successfully used in patients with vaginal agenesis with or without rudimentary uteri and in patients with previously unsuccessful treatments. New methods of diagnosis and reconstructive surgical treatment of patients with genital malformations was developed and introduced into clinical practice in the Department of Operative Gynecology of the National Medical Research Center for Obstetrics, Gynecology and Perinatology named after V.I. Kulakov. Our original experience since 1992 involves more than 300 patients who underwent this surgery. Long-term evaluation in operated patients revealed an 87.8 % satisfaction rate as compared with 76 % satisfaction rate in the control group and indicated a functional vaginal length of 12.46 ± 1.16 cm with anatomical vaginal length of 10.87 ± 1.0 cm, and a minimal complications rate. While technical and methodological advancements for neovagina formation continue to develop, research that further identifies etiologic factors in the development of vaginal agenesis, studies related to concomitant pathology in the patients, and investigations into the use of cellular technologies for the formation of the cervical canal in women with functional uteri with vaginal and cervical aplasia would be of a significant importance. Special considerations related to endometriosis in women with mullerian anomalies need further investigation as well. Two new techniques of peritoneal sheets relegating during laparoscopic colpopoiesis with the use of pelvic peritoneum (without vaginal approach) will be presented. Proposed methods provide reliable peritoneal sheets retention at the stage of its opening, downgrading and fixing to the edge of peritoneal incision. There is no need for additional fixing of the peritoneal edges with clips. That approach enforced more freedom for manipulation on the peritoneal sheets in the vaginal tunnel. Moreover, it facilitates the operation and minimizes intraoperative complications. Moreover, colpopoesis technique in women with uterine malformations associated with endometriosis and adenomyosis and in women with Rokitansky syndrome in case of adenomyosis detection in uterine remnants will be provided. New perspectives for the development of genital reconstructive surgery in the next decades would be determined by the success of basic scientific research. Significant influence will be due to the improvement of instrumentation in the reconstructive surgery, the supply of medicines, reagents, hemostatics, new sutures and synthetic meshes, procedures for adhesions formation prevention. However, the development of reconstructive surgery is not possible without improving of the precision surgical techniques.

DIAGNOSIS OF ENDOMETRIOSIS: WHAT IS NEW?

L.V. Adamyan, A.A. Stepanian, Russian Federation

Questions of diagnosis of endometriosis are in the field of scientific and clinical interest. Despite the rapid development of medicine, the diagnosis of endometriosis is still difficult. While the pathogenesis of endometriosis is still unknown, there is an average of 6-11 years delay in diagnosis following the onset of symptoms. The gold standard for the diagnosis of endometriosis is still laparoscopy followed by histological confirmation. There are no sufficiently sensitive and specific biomarkers of endometriosis detected in blood, urine, saliva, endometrium, etc. More than 100 biomarkers of endometriosis were proposed in different studies, but none of them have demonstrated sufficient diagnostic predictive value. Therefore, development of a reliable minimally- invasive or non-invasive diagnostic test is a top research priority. Over 8,000 patients with endometriosis were treated in the department of operative gynecology since 1991. In our department, we conducted a lot of research about early diagnosis of endometriosis and prediction of recurrence. We have revealed that the mass spectrometry method can be used for early diagnosis of endometriosis by lipid investigation of blood plasma and peritoneal fluid. The analysis revealed more than 140 molecular species compositions in the samples of blood plasma and peritoneal fluid of patients with endometriosis, most of which were lipids pertaining to five classes: phosphatidylcholines, phosphatidylethanolamines, sphingomyelins di- and triglycerides. Microarray study detected an increased expression of 27 genes and decreased expression of 17 genes in eutopic endometrium of women with endometriosis. Such genes as FOS, EGR-1, FOSB, DUSP1, ZFP36, JUNB, and JUN seems to be promising biomarkers for real-time PCR-based diagnostic systems creation. MicroRNA expression levels (hsa-miR - 17-5p, hsa-miR-141-5p, hsa-miR-556-3p, hsa-miR-556-3p, hsa-miR-145-5p, hsa-miR-21-5p, hsa-miR-222-3p, hsa-miR-34c-5p) can be used as a molecular marker of ovarian reserve, that will allow to diagnose early stage endometriosis and to determine the potential risk of ovarian reserve decrease. Bioinformatics analysis have identified the top-30 most strongly differentially up- and down-activated signaling pathways in endometriosis foci compared to the endometrium from women without endometriosis. We revealed high correlation between molecular changes in eutopic and ectopic endometrium. Thus, evaluation of changes in the eutopic endometrium may serve as a marker of ectopic foci presence. We conducted a study of somatic mutations in the gene of MED 12 in women with myoma and with its combination with endometriosis. The high level of mutations in both groups indicates the possibility of using MED 12 as a marker in the diagnosis of not only myoma, but also endometriosis. We have developed a method for blood flow determining in various anomalies of uterus, as well as in endometriosis and uterine myoma with dynamic contrast enhanced MRI. the method is not implemented in practice, but it is a promising for diagnosis of endometriosis. However, numerous multicentric studies that could adequately assess the effectiveness of these methods are needed for the introduction of modern diagnostic techniques in practice. Therefore, today the diagnosis of endometriosis remains one of the key object of numerous studies.

THE DILEMMA OF SOCIAL OOCYTES FREEZING - HOUSTON WE HAVE A PROBLEM!

Zion Ben Rafael
IVF Unit at Laniado Medical Center, Israel; Founder and Co-Chairmen of the Congress on Controversies in Obstetrics Gynecology and Infertility (COGI)

Delayed marriage, late childbearing especially among the affluent countries and the financial crisis of the Y-generation contribute in some countries to the dramatic decline in birth rate and population. Family planning should ideally be completed before a woman reaches age 35, at which point fertility tends to drop at a faster rate. Women are usually aware of the risks of delayed childbearing, but they have subjective sense of security amidst the popular publications that fertility treatments and IVF can always help, so they wait for the right partner or the right time, and it's often may be too late. Social freezing has fueled the imagination of patients and doctors to think that it is also the solution for all young women who delays marriage and family planning to the fourth or fifth decade of life. At first sight, the issue seems straight forward. If done in a timely manner "social oocytes freezing" (SOF) can offer an efficient solution for delayed family planning and can freeze the potential to conceive for a later age (Lockwood et al. 2011) but there are no studies supporting the cost-effectiveness of this practice. Single women at all ages are exposed to aggressive marketing of this money-generating procedure and many are calling on governments to support large scale "fertility preservation" for young women to offset the natural decrease in fertility. But is it cost-effective? SOF is a sort of insurance, where the full cost of the procedure must be paid upfront. However, the chances of usage of the eggs for the individual are unknown. Hence, the cost should be calculated as the actual cost multiplied by the expected usage, which as a rule is very low. Early freezing is associated with higher success but lower usage percentage and low cost-effectiveness and vice versa. The number of eggs needed to freeze at each age to give a fair chance of success differs and determine the cost. From one hand, ovarian physiology dictates that such freezing should be done at a younger age (25-35 years), when the chance of collecting and freezing a higher number of prime quality eggs is greater, while after 35 years the loss of fertility is much faster. However, between 25-35 years the chances of utilization are too low to make it economically viable. In general, only 1 in 20-25 eggs **collected** (4-5%) will result in the delivery of a baby (Doyle et al. 2016). The mean number of eggs collected in a single cycle is 8-12, which requires 2-4 cycles at a cost of 6-15,000 US$ per cycle plus variable yearly storage cost for a decade or so. Few theoretical studies tried to contend with the cost-effectiveness issue vis-a-vis the usage rate. And found that freezing can be cost effective only if 50-60% of women return to use their eggs. Can this figure be reached? Mesen et al (2015) have found that the most cost-effective was at age 37, at a cost of $28,759 per each additional live birth. Little benefit over no action was seen at ages 25-30 years (2.6%-7.1% increase), with societal cost of **$406,508 per live birth**! Moreover, if the probability of getting married was factored-in, as many women were ready to use the eggs only if they will get married, cryopreservation resulted in **no improvement and the societal cost will increase**. Can we expected to ever reach 50% egg usage? Not really! Using data from recent study allows to calculate that if all women between 25-35 years would freeze the eggs, only 3% maximal usage is expected and between age 35-39, if all women had frozen their eggs, only 24% will remain

infertile and this can theoretically be the maximal usage rate. The main reason stated for not using the eggs is opting to get married first which drop the usage rate even further. Recent support to this calculation was provided by two studies showing that from **1468** women freezing their eggs, 2007-2015, only 137 (**9.3**%) retuned to use their oocytes and only 40 babies were born (2.7% per patient). A second study (Hammarberg et al., 2017) of 193 women who stored their eggs between 1999-2014, only six women (3.1%!) returned to use the frozen eggs and 3 patients got pregnant (1.5%). The utilization rate is far lower than the minimum usage of 50-60% that was calculated to be cost-effective. Assuming a modest tag price of $8,000 per patient than the societal cost for each baby born in these studies will reaches between $300,00-500,000 and that assuming that only one cycle of egg banking and storage was used, otherwise the cost is double or triple. In conclusion, we should have more strict indications. As IVF treatments move from the public sectors to private hands, and as IVF is business-driven it is not easy even for the expert to decipher the scientific claims from the business-oriented claims. The fact that the sales agent of SOF are the same doctors who carry out the procedure and benefit financially carries a potential conflict. Cost-effectiveness of SOF is far less than being stated. It is important to present to the patients and the public clear and trustful information about the low numbers returning to use the eggs and the reasons. Women should know about the decrease in fertility after age 39, about the low statistical chances to find a partner after that age and about the advantages and disadvantages of SOF, including the chance that the frozen eggs may never be used, and the option of egg donation as cost-effective alternative.

MANAGEMENT OPTION FOR SUSPECTED PLACENTA ACCRETA?
Dieter Bettelheim
Division of Obstetrics and Feto-Maternal Medicine, Vienna General Hospital, Medical University of Vienna, Austria

Abnormal placental implantation occurs when placental trophoblasts invade into the superficial uterine endometrium (placenta accreta), into the myometrium (placenta increta), or beyond the uterine serosa (placenta percreta). This lecture deals with the incidence, diagnosis and therapy of this complication which seems to be more frequent in present time. The association between placenta previa accreta and prior cesarean section seems to be obvious because the incidence of placenta accreta increases as the number of previous cesarean sections increases. Patients with an antepartum diagnosis of placenta previa, who have had a previous cesarean section should be considered at high risk for developing placenta accreta. In the event of placenta accreta, the third stage of labor is often prolonged and may be complicated by severe uterine hemorrhage, requiring extensive life-saving surgical interventions such as hysterectomy and manipulation of major pelvic vessels. Massive blood and blood product transfusions are often the norm, and maternal morbidity is reported to be high. This is the reason why a targeted ultrasound screening should be performed for all women after 2 previous caesarean sections and/or placenta previa. Prenatal diagnosis of placenta percreta is feasible with high sensitivity and specificity for an experienced sonographer using colour doppler sonography. I will talk about the incidence, predisposing factors, diagnosis, clinical implications and management options of this condition by presenting an overview of our cases and our management of pregnancy and delivery in these complicated situations.

PREECLAMPSIA AND FETAL CONGENITAL HEART DEFECTS
Julia Binder, Austria

Congenital heart defects (CHD) affect up to 8 in 1000 live births. The major causes still remain undefined. An imbalance in angiogenic-antiangiogenic factors seems to be present both in the circulation of preeclamptic women and in fetuses with congenital heart defects, suggesting a role in the development of the latter. However, recent data show an association between the presence of a fetus with CHD and the risk of developing early preeclampsia in this pregnancy, whereas early preeclampsia in a previous pregnancy is related to an increased risk of fetal CHD in the ongoing pregnancy. These findings are of significant clinical importance and deserve further attention.

DOES THE PILL CAUSE DEPRESSION?
Johannes Bitzer, Switzerland

Introduction: There is a longstanding controversy regarding the impact of combined hormonal contraceptives on mood. In a recent large registry data based study the risk of depression was significantly higher in COC users. **Objective:** Compare studies with contradictory results and analise reasons for differences. **Results:** Several studies show improvement of mood in women with depression or premenstrual dysphoric disorders while using COCs with different progestogens. Other studies show deterioration of mood in COC users with associations to preexisting depression. To understand these differences research on PMS and PMDD shows a large individual responsiveness of the serotonin pathways and the GABA receptor to ovarian hormones pointing into the direction of individual vulnerability. In addition, psychosocial factors like negative life events, loss of sense in life, separation and personal losses have been described as having an important impact on depression. **Conclusion:** Women reporting mood deterioration while using CHC should be taken care of in a comprehensive way taking into account hormonal vulnerability to specific steroid hormones and the individual life context. Solutions should be searched including change of steroids, non-hormonal contraception and psychological counselling

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HORMONAL CONTRACEPTION AND FEMALE SEXUALITY
Johannes Bitzer, Switzerland

Introduction: Contraceptive methods give women and men the ability to separate sexual activity from reproduction. Thus, contraception and sexuality are intimately linked with each other and contraceptive and sexual behaviour influence each other. **Problem:** In some observational studies, the use of COC was associated with sexual dysfunctions. The EE induced elevated SHBG and subsequent diminution of free T is hypothesized to cause HSDD and low dose EE COCs in young predisposed women are considered to cause pain during intercourse. **Methods:** Review of the literature including observational studies, post marketing surveillance publications addressing OC use and sexual function and satisfaction. **Results:** Lack of experimental studies and methodological consistency with numerous uncontrolled possible confounders in most studies. Equivocal results showing increase and decrease in sexual function. No direct correlation between sexual desire and SHBG levels. A lack of studies comparing different progestogens. Hormonal contraceptives can interfere with sexual function by: a) having a positive or negative influence on physical and psychological wellbeing and on the user's body image (skin, weight, pain, mood, menstruation etc.)**;** b) interfering with sex hormone actions (increase of SHBG, decrease of free androgens, antioestrogenic action of progestogens etc.); c) interacting with intrapsychic conflicts about wish for a child, sense of sexual activity etc. (self-determination and emancipation versus manipulation); d) having an impact on the couple's dynamics regarding sex and family planning (balance of gender, responsibility etc.) **Conclusion:** Sexual function and satisfaction are complex subjective experiences determined by many interacting variables. Subtle endocrine changes induced by COCs may in predisposed "vulnerable" women contribute to sexual dysfunction. Psychosocial assessment and counselling as well as evaluation of the impact on physical and mental wellbeing are important and eventually adaptation of EE dosage and change of the progestogen are to be considered.

DEBATE INDIVIDUALIZED STIMULATION: THE WAY TO GO OR UNNECESSARY EFFORT?
Frank J. Broekmans
Department for Reproductive Medicine, University Medical Center Utrecht, Netherlands

Assisted reproduction technology is increasingly applied as a treatment mode for couples with both explained and unexplained infertility. The first step in this treatment is the creation of multiple follicles with the purpose of obtaining the oocytes held within these follicles, creating embryos in the IVF laboratory and replacing the embryos into the uterine cavity. Controlled ovarian stimulation is mostly applied by using exogenous FSH. The response of the ovaries to this exogenous FSH exposure demonstrates a high degree of variation. From a clinical significance point of view the poor ovarian response defined as the yield of less than 4 oocytes is related to a clearly unfavorable prognosis for live birth, although much of this poor prognosis is in fact dictated by female age and not by the low egg number per se. At the other side of the spectrum excessive response arbitrarily defined as obtaining more than 15 oocytes at pick up will increase treatment risks for the patient and may even slightly limit the rates of live birth. It is therefore that many clinicians across the world try to foresee the ovarian response category in order to adjust the stimulation protocol with the expectation that the ovarian response can be brought into the normal range (5-15 oocytes) and that by doing so the prospects of pregnancy as well as the safety for the couple will improve. Prediction of ovarian response category today is mainly applied by using the Antral Follicle Count or AntiMullerian Hormone in the early follicle phase. Both relate to the number of antral follicles present at any time and the source for the number of dominant follicles that could grow in results to the application of exogenous FSH. As such, these two ovarian response tests (ORTs) have become the standard test for response prediction, although factors such as female age and possibly body weight may add to this predictive information. It may be noted still that predictions will generally be false positive in

some 15% of cases, while only 60-70% of true out of the normal range resp0nders will be identified. Basing the FSH stimulation dosage on such predictions will be imprecise proactive from the start. Recent large controlled trials have demonstrated that ORT based individualized dosing of the FSH preparation is not likely to alter the fate of the predicted poor responder but may help in reducing the risks of the predicted excessive responder. Unfortunately, the promises of earlier studies that individualized dosing would also affect live birth rates in the ART program as a whole have not been fulfilled. Specifically, in predicted poor responders the actual occurrence of a poor response in spite of slight adjustments in the stimulation protocol (with a maximum dosage of 225 IU per day) will mean that the couple is in a prognostic unfavorable category. There, the combination of low AMH or AFC and the first cycle poor response may help to decide whether continuation of the ART treatment is really feasible. The real gain of individualized FSH dosing could be the management of the hyper responding patient. The question then remains whether the AFC will be the prior screening test to select patients to undergo blood sampling for AMH assessment in order to confirm a sufficient risk of excessive response and apply reduced FSH dosage or antagonist co-medicated stimulation protocols. We may sincerely consider whether a standard dosage using an antagonist protocol, with the escape of GnRH agonist triggering in case of excessive ovarian response, with a freeze all strategy as second step, will not be the method to circumvene imprecise dose picking based on response tests with moderate precision.

ENDOMETRIAL CELLULAR SENESCENCE AND IMPLANTATION FAILURE

Jan J. Brosens
Division of Biomedicine, Warwick Medical School, UK & Tommy's National Miscarriage Research Centre at University Hospitals Coventry & Warwickshire, UK

In mice, receptivity of the progesterone-primed endometrium is critically dependent on a transient rise in circulating E2 levels. By contrast, the human implantation window is not controlled by an E2 surge but coincides with differentiation of endometrial stromal cells (EnSCs) into specialized decidual cells. Following cell cycle exit at G0/G1, decidualizing EnSCs first mount a transient pro-inflammatory response, characterized by secretion of various inflammatory mediators. Exposure of the mouse uterus to this inflammatory secretome activates multiple receptivity genes, suggesting that the nidatory E2 surge in mice is supplanted by an endogenous inflammatory signal in the human uterus. How this inflammatory implantation signal is generated by decidualizing EnSCs is not known. Here we show that rapid E2-dependent growth during the proliferative phase causes replication stress in a subpopulation of EnSCs. Upon decidualization, this subpopulation of stressed EnSCs undergo acute cellular senescence and transiently secrete a host of inflammatory mediators involved in endometrial receptivity. In parallel, Il-15 secreted by decidual cells activates uterine natural killer (uNK) cells, which then target and eliminate senescent cells through granule exocytosis. Thus, the systematic clearance of senescent EnSCs by uNK cells not only remodels but also rejuvenates the endometrium at the time of embryo implantation. Our data infer that suboptimal replicative stress due to inadequate endometrial growth and/or excessive uNK cell activity predispose for implantation failure. Conversely, lack of endometrial mesenchymal stem cells (MSCs), heightened cellular senescence and an excessive and prolonged peri-implantation inflammatory response are strongly associated with recurrent miscarriage.

DETECTION OF MOSAICISM IN TROPHECTODERM BIOPSIES: AGAINST

Antonio Capalbo, Italy

Defining the actual incidence and prevalence of mosaicism in human blastocysts still remains a difficult task. The small evidence generated by animal and human studies does not support the existence of mechanisms involved in developmental arrest, clonal depletion or aneuploidy rescue for abnormal cells in euploid/aneuploid embryos during preimplantation development. However, studies in humans are mainly descriptive and lack functional evidences. The evidence on human blastocysts suggests that a mosaic euploid/aneuploid configuration is detected in around 5% of embryos. This figure supports the extremely low level of mosaicism reported in natural and IVF pregnancies. Similarly, the clinical management of patterns consistent with the presence of mosaicism in a TE biopsy during preimplantation genetic diagnosis cycles (PGD-A) is still a controversial issue. Despite the fact that some contemporary comprehensive chromosomal screening platforms can detect mosaic samples in cell mixture models with variable accuracy and many reproductive genetics laboratories are now routinely including embryonic mosaicism on their genetic reports, a diagnosis of certainty for mosaicism in PGD-A cycles is conceptually impracticable. Indeed, several technical and biological sources of errors clearly exist when trying to estimate mosaicism from a single TE biopsy in PGD-A cycles and must be understood to adequately guide patients during clinical care. At the present, reports of mosaicism should be avoided in blastocyst PGD-A cycles due to the several technical and biological issues present when attempting this type of diagnosis and the lack of evidence from non-selection studies. The observation of intermediate chromosome copy number profiles would be better reported as a "pattern consistent with the presence of mosaicism" and genetic counselling should be provided to guide patient's decisions.

ESTROGENS PROTECT AGAINST BREAST CANCER AND CAN BE USED IN SELECTED CASES FOR THE TREATMENT OF BREAST CANCER

Herjan Coelingh Bennink, The Netherlands

Estrogens have a bad reputation in relation to breast cancer (BC) and hormone replacement therapy (HRT) has been blamed to increase the risk of BC. However, the Women's Health Initiative (WHI) studies have confirmed many earlier observations, that it is not the estrogen, but the progestin, that causes the increased risk, whereas estrogen-only treatment decreases the risk of BC. Estrogens are known to stimulate the growth of existing estrogen-receptor positive breast cancer, but estrogens are also an effective treatment of this malignancy. This contradictory knowledge is known as the "estrogen paradox". The data summarised in this presentation demonstrate that high-dose estrogens are an effective treatment of advanced breast cancer, both as first-line treatment as well as for treatment after the occurrence of resistance to endocrine anti-estrogen treatment with tamoxifen (TAM) and/or aromatase-inhibitors (Ais). Essential for efficacy is an extended period of estrogen deprivation before the tumour is subjected to estrogen treatment (the "gap hypothesis"). Research on the mechanism of action has shown that apoptosis induced by estrogens is regulated via the estrogen receptor and growth factor signalling pathways. High-dose estrogens have a negative safety image in terms of side-effects and increased rates of cardiovascular disease, but the safety data from the literature do not give rise to major concerns. Conclusion: taking into account the observed clinical efficacy and the side-effect profile, high-dose estrogens should be considered as a valuable alternative before the use of chemotherapy in selected patients after failure of TAM and/or AIs.

VULVOVAGINOPLASTY

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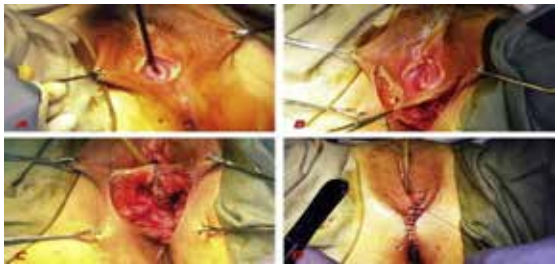
The Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome is a rare congenital abnormality of the female genital tract presented with aplasia of the uterus and the upper two-thirds of the vagina in an otherwise normal 46XX individual. The incidence is approximately one case in 4000 women. The syndrome is frequently associated with other nongynecological defects, such as: urinary tract anomalies, vertebral deformities and to a lesser extent auditory and cardiac lesions. Furthermore the absence of the vagina and the uterus have a profound psychological impact on the young woman's sense of femininity, so that the demand for a sexual life makes the creation of a neovagina strongly advisable. Several techniques of vaginal reconstruction, surgical or nonsurgical, have been reported as the Creatsas vaginoplasty, the Franks procedure, the Williams vaginoplasty, the McIndoe operation, the Vecchietti technique and others. The Creatsas vulvo-perineoplasty is a modification of the Williams' procedure. It is a simple, safe and quick operative method resulting in a functioning vagina, similar to normal. We developed our technique in 1981 and until now we have performed 254 cases.



In conclusion, the aim of all methods is the creation of a vaginal channel of adequate functional depth and width, with axial deviation similar to normal. Our experience shows that the Creatsas vaginoplasty is a simple, quick, and effective vulvo-perineoplasty that satisfies all the requirements.

INNOVATIVE CONTROLLED OVARIAN STIMULATION (COS) FOR ART

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Controlled ovarian stimulation (COS) was developed for increasing the yield of ART by allowing the harvest of multiple oocytes and thus, the development of multiple embryos. The concept of COS therefore is to induce multiple follicular development by opposing the natural mechanism that limit the ovulatory quota to one in humans. This is achieved by opposing the mid-follicular phase decrease in FSH, which is responsible for sending the smaller follicles of the cohort to atresia while allowing the larger follicle to mature in a progressively LH dominant environment. Historically, the decrease in FSH has been antagonized by either stimulating endogenous FSH production – using clomiphene citrate or aromatase inhibitors – or administrating exogenous FSH. The latter has been the most common mode of inducing COS in ART. In the menstrual cycle, follicular recruitment in induced by a FSH elevation during the inter-cycle interval, which classically peaks approximately on cycle day 3. Further follicular development is pursued under LH dominance, when FSH declines under the influence of rising levels of E2. In COS, the role of LH – and LH dominance – in the late follicular phase was typically ignored in the early development of COS. As soon as separation techniques and recombinant approaches allowed to develop pure FSH preparations, FSH-only approaches were recommended for COS. More recently, ultra-pure urinary gonadotropin preparations that foster FSH and LH effect properties have been proposed for COS. RCTs showed more favorable hormonal profile in COS conducted by hMG that combines FSH and LH effects, as compared to protocols using recombinant FSH (recFSH) only. Notably, hMG protocols were associated with lower progesterone levels in end-follicular phase stages, as compared to findings made in women receiving recFSH. Preparation providing FSH and LH effects are of different types. First, a preparation exists that combines recFSH and LH recombinant origin (recLH). This however suffers from the short half-life of recLH, which would warrant bi-quotidian administration for the desired efficacy. Second, another group of preparations – human menopausal gonadotrophines (hMG) – provides LH effects in addition to the FSH properties gained from hCG contained in the preparation. hMGs offer the advantage over recFSH/recLH preparations to provided sustained LH effects, as notably expressed by a more favorable end-follicular phase hormonal profile. A phase III randomized controlled trial (RCT) compared the new ultra-pure hMG preparation, Meriofert®, to an older preparation (Lockwood et al. RBM on line 2017). While Meriofert gains its LH activity from added hCG of chorionic origin, the older preparation has hCG of pituitary origin. The difference in half-life of hCG of pituitary and chorionic origin – longer in the latter case – was responsible for different efficacy of the two products. The hMG preparation Meriofert resulted in more oocyte despite similar hMG doses, defined by the study protocol. Moreover, Meriofert resulted in a higher oocyte utilization rate with a higher mature-to-total-oocyte rate. Ultimately, there was a trend toward higher cumulative pregnancy rate in the Meriofert group. In conclusion, recent data showed that hMG results in a more functional hormonal profile in the late phase of COS notably, with lower progesterone levels. The recent development of a hMG preparation gaining LH effect from hCG of chorionic origin offers added efficacy, as compared to preparations using hCG of pituitary origin.

FERTILITY SPARING MANAGEMENT IN YOUNG ENDOMETRIAL CANCER PATIENTS

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Endometrial cancer (EC) in young women of reproductive age is a relatively rare diagnosis. However, since in the modern era women delay their childbearing for a variety of reasons, more and more women in the near future will be nulliparous and have a diagnosis of EC at the same time. Hence, a more conservative approach of EC is desirable to preserve fertility of these women, without compromising their survival. Recently, the number of studies reporting encouraging results on fertility-sparing management of EC with high dose of progestins is increasing. It seems that preserving the uterus and the ovaries in a carefully selected patient with EC confers only a very small risk combined with an enormous benefit. Selection of women suitable for such a conservative approach, as well as method of treatment, follow-up, recurrence, survival rates as well as obstetric outcomes, are very important parameters when consulting women with EC wishing to preserve their fertility. In this lecture, the current evidence regarding all the previously mentioned aspects will be reviewed and clinical recommendations, based on published data, about the most proper approach and consultation of these patients will be provided.

ROLE OF FETOSCOPIC ENDOTRACHEAL OCCLUSION (FETO) TO PREVENT PULMONARY HYPOPLASIA

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Congenital diaphragmatic hernia (CDH) is one of the more common major birth defects and imposes a significant medical and socioeconomic burden. Despite significant advances in neonatal surgical care, the mortality and morbidity associated with this condition remain exceptionally high, and the poor outcomes have driven the development of in utero treatment strategies for this condition. The degree of pulmonary underdevelopment is the main cause of perinatal mortality. Fetuses with CDH presenting with liver herniation and a low lung area-to-head circumference (LHR) have a high likelihood of neonatal death from pulmonary hypoplasia. Following encouraging results in animal models, fetal tracheal occlusion is performed now antenatally with the aim of triggering lung growth through the entrapment of lung fluid, and is performed with the minimally invasive technique of Fetoscopic Endoluminal Tracheal Occlusion (FETO) with a detachable balloon. Ultrasonography following FETO demonstrate improved lung echogenicity within 48 hours and an increased LHR within 2 weeks of surgery. The key to appropriate selection of fetal patients for FETO is to identify those at high risk of demise with conservative management and postnatal therapy alone. The timing of FETO and balloon removal before birth, as well as the EXIT strategy for fetuses born with the endotracheal balloon in situ, will be described here.

PRENATAL SURGERY FOR SPINA BIFIDA APERTA: MOVING IT FROM BENCH TO BEDSIDE

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The prenatal diagnosis of neural tube defects (NTD) allows parents to consider all prenatal options. Though NTD can be diagnosed in the first trimester (1), the majority of cases of spina bifida are still being picked up in the second trimester. In a recent series of 167 patients we assessed patients referred to for suspected NTD at a median of 19 wks (2). Cranial lesions were diagnosed significantly earlier than spinal lesions. Of the open spinal lesions, 77% were isolated. Only 22% were managed expectantly, in line with high termination rates elsewhere in Europe. There was no correlation between parental prenatal management decisions and disease specific severity markers. Since 2012, we also offer open fetal surgery for selected cases of spina bifida aperta. We started our program after combined in house and exported training in collaboration with the Children's Hospital of Philadelphia (3). By 2016 we operated over 20 cases, with an outcome comparable with the results obtained in the *Management of Myelomeningocoele Study* (4). In that randomized trial (n=183), the number of children needing a ventriculo-peritoneal-shunt, who were operated in utero, was half what was observed the postnatal repair group (40% instead of 82% at 12 month). Also motor development at 30 months of age in prenatally operated children was better. The number of children that could independently walk doubled from 20 to 40% in the fetal surgery group. Drawbacks are the maternal morbidity,

but mainly a high risk for preterm rupture of the membranes and preterm delivery. In patients operated on before birth, gestational age at delivery was 34±3,1 wks compared to 37,3±1,1 wks in the unoperated group. Further follow up of the MOMS cohort showed persistently lower shunt rates, yet more benefit in fetuses with normal ventricles (5) and partial improved lower urinary tract function (6). Practically, the intervention is preferably performed between 24 and 26 weeks (because of lower membrane rupture rates (7)). It requires combined loco-regional and maternal anesthesia, maternal laparotomy and hysterotomy (8). Though the majority of contacts so far were initiated by patients, we aim to set up as early as possible a communication channel with the referring team. We do ask for upfront local multidisciplinary counseling by fetal medicine specialist, neonatologist, pediatric neurosurgeon and/or – neurologist about all options. To avoid needless travel, we have made an easy checklist for referring physicians, a standardized letter for the patient insurance and provide upfront a quotation. Within Europe so far not a single referral was denied financial coverage. It would be difficult to justify denial by the insurance, given the level of evidence for fetal surgical repair, which includes saving management costs (9). Though most centers in the USA require patients to stay on campus and deliver at the fetal surgery site, we have adhered to a pragmatic policy of offering patients to return to their own tertiary institute, used to managing newborns with spina bifida – given the maternal fetal medicine specialists agree to the further management during pregnancy and elective cesarean delivery at around 37 weeks, and that outcomes will be provided to us. So far, we do not offer the maternally better acceptable fetoscopic approach, as the procedure remains associated with a higher membrane rupture rate and other technical limitations, questioning it being as now an equivalent procedure (10, 11). We have a research program which is dedicated to the development of fetoscopic techniques that allows exact replication of the open procedure, or alternatives which have been shown to be equally effective (www.gift-surg.ac.uk). That project is a collaboration between UCL and KU Leuven supported by the Wellcome Trust.

1. Engels AC, Joyeux L, Brantner C, De Keersmaecker B, De Catte L, Baud D, et al. Sonographic detection of central nervous system defects in the first trimester of pregnancy. Prenat Diagn. 2016.
2. Ovaere C, Eggink A, Richter J, Cohen-Overbeek TE, Van Calenbergh F, Jansen K, et al. Prenatal diagnosis and patient preferences in patients with neural tube defects around the advent of fetal surgery in Belgium and Holland. Fetal Diagn Ther. 2015;37(3):226-34.
3. Cohen AR, Couto J, Cummings JJ, Johnson A, Joseph G, Kaufman BA, et al. Position statement on fetal myelomeningocele repair. Am J Obstet Gynecol. 2014;210(2):107-11.
4. Adzick NS, Thom EA, Spong CY, Brock JW, 3rd, Burrows PK, Johnson MP, et al. A randomized trial of prenatal versus postnatal repair of myelomeningocele. N Engl J Med. 2011;364(11):993-1004.
5. Tulipan N, Wellons JC, 3rd, Thom EA, Gupta N, Sutton LN, Burrows PK, et al. Prenatal surgery for myelomeningocele and the need for cerebrospinal fluid shunt placement. J Neurosurg Pediatr. 2015:1-8.
6. Brock JW, 3rd, Carr MC, Adzick NS, Burrows PK, Thomas JC, Thom EA, et al. Bladder Function After Fetal Surgery for Myelomeningocele. Pediatrics. 2015;136(4):e906-13.
7. Moldenhauer JS, Soni S, Rintoul NE, Spinner SS, Khalek N, Martinez-Poyer J, et al. Fetal myelomeningocele repair: the post-MOMS experience at the Children's Hospital of Philadelphia. Fetal Diagn Ther. 2015;37(3):235-40.
8. Bebbington MW, Danzer E, Johnson MP, Adzick NS. Open fetal surgery for myelomeningocele. Prenatal diagnosis. 2011;31(7):689-94.
9. Werner EF, Han CS, Burd I, Lipkind HS, Copel JA, Bahtiyar MO, et al. Evaluating the cost-effectiveness of prenatal surgery for myelomeningocele: a decision analysis. Ultrasound Obstet Gynecol. 2012;40(2):158-64.
10. Joyeux L, Engels AC, Russo FM, Jimenez J, Van Mieghem T, De Coppi P, et al. Fetoscopic versus Open Repair for Spina Bifida Aperta: A Systematic Review of Outcomes. Fetal Diagn Ther. 2016.
11. Flake A. Percutaneous minimal-access fetoscopic surgery for myelomeningocele - not so minimal! Ultrasound Obstet Gynecol. 2014;44(5):499-500.

CURRENT MANAGEMENT OF UF: SURGERY OR MEDICAL TREATMENT FOR ALL? SURGICAL MANAGEMENT FOR ALL

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Nowadays there is a great variability for the management of the patients with uterine fibroma. Differences in age, severity of symptoms and characteristics of these benign tumors make difficult to create a general rule of treatment, suggesting that an individual assessment of each case is necessary. Surgery can be considered as a keystone of treatment for women with large or symptomatic fibroids and hysterectomy, laparoscopic and hysteroscopic myomectomy are the most used. Hysterectomy is a radical and definitive treatment for fibroids, particularly for women who do not wish to conceive and/or women aged above 40/50 years. Endoscopic myomectomy is a minimally invasive surgical approach to treat symptomatic uterine fibroids in women desiring fertility-sparing procedures. The rationale of laparoscopy is that the incisions are smaller than laparotomy and consequentially there is less post-operative pain with a shorter hospital stay and faster recovery for the patient. With technical advances, morcellators have shortened the time required for removal of specimens and thus have reduced total operating time for laparoscopic myomectomy even if after the FDA statement on November 24, 2014 the use of laparoscopic power morcellators has been severely limited for the risk of spreading of occult leiomyosarcoma. When fibroids are submucosal, or when most of an intramural fibroid protrudes into the uterine cavity (type 0, 1 or 2 myomas), the hysteroscopic resection of fibroids is the preferred method. Last studies suggest also hysteroscopic resection as a potential alternative to traditional surgery for type 3 myoma. To date, this procedure must be confined to skilled surgeons since it is a difficult procedure with a high rate of second procedure and creation of synechiae. As adjuvant treatment of fibroids, medical therapies are frequently considered to decrease blood loss and facilitate a minimally invasive approach; for example, pre-surgical treatment with leuprolide may also allow a patient, initially presenting with large myomas, to undergo a minimally invasive procedure by decreasing the uterine size. Moreover, in the last years, the appearance of ulipristal acetate as a medical etiological treatment (with his anti-proliferative, anti-fibrotic and pro-apoptotive effects on the fibroid), has substantially changed the clinical indications. This treatment allows easier intervention of fibroids with greater surgical complexity as well as the reduction of unnecessary surgeries. In light of this, to be less-aggressive and non-invasive as possible, only a good collaboration between the surgical and medical treatment could give a better option of treatment in the future.

HOW CAN SURGERY IMPROVE FERTILITY IN ADENOMYOSIS? THE RIGHT PROCEDURE FOR THE RIGHT PATIENT

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Adenomyosis is defined as the presence of endometrial glands and stroma in the myometrium and its pathogenesis is not still fully explained. Generally, it is accepted to result from direct invasion of endometrium into the myometrium. Adenomyosis is most likely found during the fourth and fifth decades of life and with the trend of delayed childbearing, it is being diagnosed more frequently in infertility patients. Diagnosis was once by the histologic examination of the hysterectomy specimen, but advanced imaging techniques like magnetic resonance imaging and 3-D transvaginal ultrasound made it possible to diagnose it in a non-invasive way. Presence of asymmetrically enlarged uterus, myometrial avascular cysts, hyperechoic linear stria in the myometrium and increased junctional zone thickness all contribute to the diagnosis of adenomyosis with sensitivities of >90%. Whether adenomyosis affects fertility negatively is a debate, and the literature is controversial. The data about the relation between adenomyosis and endometriosis is also controversial, but it is reported that >20% of patients with endometriosis have also adenomyosis. It is demonstrated that presence of adenomyosis decreased the likelihood of pregnancy after assisted reproduction by 28% compared to patients without adenomyosis. Additionally, miscarriage rate is significantly higher in patients with adenomyosis. A meta-analysis with 5 studies showed that presence of adenomyosis reduced the chance of pregnancy 68% in patients who had deep endometriosis surgery. Symptoms of adenomyosis are dysmenorrhea, pelvic pain, abnormal uterine bleeding and infertility. In the past, the traditional treatment for adenomyosis was hysterectomy. However, reproductive aged women seeking pregnancy should be managed with conservative treatment. Medical treatments for symptomatic patients include NSAİD, oral contraceptives, progestins and GnRH agonists. However, these treatments do not increase fertility. Surgical treatment should be individualized and is indicated in patients who are refractory to medical treatment or have multiple unsuccessful treatment attempts for pregnancy. Available surgical techniques include adenomyomectomy for focal lesions and cytoreductive surgery for diffusely involved uteri. The technique for adenomyomectomy is similar to myomectomy either by laparotomy or laparoscopy, but dissection planes with adenomyoma and myometrium is not well defined. Therefore, there is a risk of removing healthy myometrial tissue. Cytoreductive surgical techniques like triple flap technique and H - incision technique are defined in the literature for diffuse adenomyosis with different success rates. Hysteroscopic resection is also possible for lesions extending into the endometrial cavity like polypoid adenomyomas. The reported pregnancy rates for all these surgical procedures are between 47% to 60%. It is not clear whether combining surgery with GnRH agonist improves outcome, but it is hypothesized that this may have a synergistic effect. Postoperative serious complications like severe pelvic adhesions, recurrence or incomplete resection and uterine rupture during pregnancy should also be discussed with the patient before deciding for surgery.

GNRH AGONISTS FOR FERTILITY PRESERVATION

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According to ASCO (1) and ASRM (2) recommendations, evidence supporting the effectiveness of gonadotropin-releasing hormone (GnRH) agonists for FP is currently insufficient, although it is recognized that these agents might yield other medical benefits, such as reduced vaginal bleeding when patients have low platelet counts as a result of chemotherapy. Reviews on the topic remain contentious, even if a randomized controlled trial (RCT) found that the ovaries are protected from depletion by administration of GnRH agonist in young women receiving cyclophosphamide (3). As stressed by the authors themselves, the markers of ovarian reserve (like anti-Müllerian hormone [AMH] and antral follicle count [AFC]) were not evaluated. Moreover, the real benefits should not only be evaluated in terms of recovery of menses, but in terms of ongoing pregnancy and live birth rates. A very recent RCT, clearly demonstrated the absence of any beneficial effect of GnRH agonists on future pregnancy rates (4). Until definitive proof of efficacy has been clearly established, other FP approaches should be offered alongside GnRH agonist therapy.

1. *Loren AW, Mangu PB, Beck LN, Brennan L, Magdalinski AJ, Partridge AH et al. American Society of Clinical Oncology. Fertility preservation for patients with cancer: American Society of Clinical Oncology clinical practice guideline update. J Clin Oncol. 2013 Jul 1;31(19):2500-10.*
2. *Ethics Committee of American Society for Reproductive Medicine. Fertility preservation and reproduction in patients facing gonadotoxic therapies: a committee opinion. Fertil Steril. 2013;100:1224-31.*
3. *Moore HC, Unger JM, Phillips KA, Boyle F, Hitre E, Porter D et al.; POEMS/S0230 Investigators. Goserelin for ovarian protection during breast-cancer adjuvant chemotherapy. N Engl J Med. 2015;5;372:923-32.*
4. *Demeestere I, Brice P, Peccatori FA, Kentos A, Dupuis J, Zachee P et al. No Evidence for the Benefit of Gonadotropin-Releasing Hormone Agonist in Preserving Ovarian Function and Fertility in Lymphoma Survivors Treated With Chemotherapy: Final Long-Term Report of a Prospective Randomized Trial. J Clin Oncol. 2016;34:2568-74.*

THE ARTIFICIAL OVARY

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A serious concern that must be addressed is the risk of reimplanting malignant cells together with the grafted tissue, especially in patients with leukemia (1), which is the most common hematological cancer in women under 20 years of age. The risk is particularly high in women with acute leukemia and cannot be completely eliminated, even if the biopsy destined for cryopreservation is taken from patients in complete remission (2). One alternative to avoid reimplanting malignant cells is to obtain mature oocytes by means of the so-called transplantable artificial ovary. Isolation of primordial follicles from cryopreserved ovarian tissue and their transfer onto a scaffold to create this artificial organ will serve to eliminate the risk of transmission of malignant cells (3,4). Recent developments in the isolation technique with GMP grade enzymes and involving washing the follicles three times (5), have proved successful, making this option applicable to leukemic patients (6). Growing antral follicles were observed after autografting primordial follicles inside a fibrin scaffold in a mouse model (7) and after xenografting human primordial follicles in mice with severe combined immunodeficiency (8). The different steps necessary to create an artificial ovary will be revised.

1. *Dolmans MM, Marinescu C, Saussoy P, Van Langendonckt A, Amorim C, Donnez J. Reimplantation of cryopreserved ovarian tissue from patients with acute lymphoblastic leukemia is potentially unsafe. Blood. 2010;116:2908-14.*
2. *Greve T, Clasen-Linde E, Andersen MT, Andersen Mk, Sørensen SD, Rosendahl M, Ralfkiaer E, Andersen CY. Cryopreserved ovarian cortex from patients with leukemia in complete remission contains no apparent viable malignant cells. Blood. 2012;120(22):4311-6.*
3. *Luyckx V, Dolmans MM, Vanacker J, Scalercio SR, Donnez J, Amorim CA. First step in developing a 3D biodegradable fibrin scaffold for an artificial ovary. J Ovarian Res. 2013 25;6(1):83.*
4. *Chiti MC, Dolmans MM, Donnez J, Amorim CA. Fibrin in Reproductive Tissue Engineering: A Review on Its Application as a Biomaterial for Fertility Preservation. Ann Biomed Eng. 2017;45(7):1650-1663.*
5. *Soares M, Sahrari K, Amorim CA, Saussoy P, Donnez J, Dolmans MM. Evaluation of a human ovarian follicle isolation technique to obtain disease-free follicle suspensions before safely grafting to cancer patients. Fertil Steril. 2015;104(3):672-80.e2.*
6. *Soares M, Saussoy P, Maskens M, Reul H, Amorim CA, Donnez J, Dolmans MM. Eliminating malignant cells from cryopreserved ovarian tissue is possible in leukaemia patients. Br J Haematol. 2017;178(2):231-239*
7. *Luyckx V, Dolmans MM, Vanacker J, Legat C, Fortuño Moya C, Donnez J, Amorim CA. A new step toward the artificial ovary: survival and proliferation of isolated murine follicles after autologous transplantation in a fibrin scaffold. Fertil Steril. 2014;101(4):1149-56*
8. *Paulini F, Vilela JM, Chiti MC, Donnez J, Jadoul P, Dolmans MM, Amorim CA. Survival and growth of human preantral follicles after cryopreservation of ovarian tissue, follicle isolation and short-term xenografting. Reprod Biomed Online. 2016;33:425-32.*

TIME LAPSE: WHAT HAVE WE LEARNED SO FAR? DO UNIVERSAL ALGORITHMS WORK?

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Time-lapse imaging is an emerging technique aiming for a better assessing of embryo quality in ART treatments. There is evidence that the timing, duration and synchronization of events can be correlated to viability and pregnancy, thus, introducing potential new dynamic parameters of embryo quality. For an optimization of the annotation process a universal algorithm would be of great benefit. Luckily, the time-lapse annotation of dynamic and static morphologic parameters of embryo development are very consistent within and between observers which is crucial to the validity of embryo scoring/selection and the existence of an algorithm. It has to be kept in mind that numerous potential confounders exist which alone or in combination might affect timing of cleavages. In other words, algorithms applied in one clinic may need slight adaption in another IVF unit.

PREMATURE BIRTH

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Introduction: According to the WHO definition, which may occur prior to childbirth 37 weeks called premature birth (PB). Somewhere it as a lower limit which is mentioned each birth between 20 + 6/7 weeks, or 22 weeks, and therefore it is the major perinatal problem as the leading cause of neonatal morbidity and mortality. PB in 75-80% of cases the cause of perinatal mortality. Premature infants are given the age wearing classified into the following subgroups: ● extreme (born before 28 W). ● moderate (born between 28 and 33 W); ● late (born between 34 and 36 W). If factors of PB causes are not known it is the so-called. idiopathic premature labor, which accounts for around 50% of all premature births. Intrauterine infections are, according to the studies in which the assayed cultures of amniotic fluid, associated with a 25-40% PB. 1) a premature contraction without the rupture of the membranes (40% to 50% of cases), 2) a premature rupture of the membranes prior to the beginning of the contraction (20% to 30% of cases), 3) optionally a preterm delivery as well as medical procedures because of the indication of the mother or the child (20% up to 30% of cases). **Diagnosis:** 1) Good Medical history, dating of pregnancy, 2) Clinical examination, 3) Ultrasound and measurement of cervical length, 4) Laboratory analysis -CBC, CRP, swabs, urine culture, fibronectin, interleukins, 5) Monitoring at houses-authors of the Cochrane review found 15 randomized trials (which were included 6008 women), and 13 of them contained data that were could be used for further analysis. **Therapy:** 1) Bed rest, 2) Progesterone (oral, vaginal, intramuscularly) - plays a significant role in establishing an adequate immune environment during pregnancy because it affects lymphocytes that pregnant women are released protein called PIBF (Progesterone Induced blocking factor), which mediate the immunomodulatory activity of the progesterone and anti-abortivnom. Peripheral lymphocytes pregnant woman is at risk of preterm birth produce elevated levels of pro-inflammatory cytokines as well as interferon-γ (IFN-γ), tumor necrosis factor-α (TNF-α), interleukin 2 (IL-2), whereas the production of PIBF and anti-inflammatory cytokines, especially interleukin-10 (IL-10) is decreased. During normal pregnancy, PIBF concentration continuously increases from 7 to 37 weeks of gestation. After 41 weeks of gestation, the concentration of PIBF intense fall. In a randomized double blind controlled trial has not been proven influence of vaginal administration of 200 mg progesterone in women with preterm labor in decrease in the frequency of preterm birth or of neonatal complications. 3) Tocolytics - Magnesium sulphate - toxicolytical and neuroprotective effects. ● Blockers of calcium channels is (eg. Nifedipine) reduces entry of calcium ions into cells miometralne, and its decreased concentration relaxing the muscle cells. ● **C**yclo oxigenase- The mechanism of action is the inhibition of the cyclooxygenase enzyme in the synthesis of the prostaglandin. ● Oxytocin receptor blockers such as atosiban. ● Nitroglicerin- clinical studies have not led to results which indicate the efficacy of the therapy have a preterm delivery. ● **C**orticosteroids - favorable action on the development of the lungs of the fetus has been proven, and they operate in the maturation of the alveoli and the alveolar epithelium, as well as the ripening of the mechanism of production of the surfactant. The optimal effect on the health of premature infant achieved when corticosteroids are administered from 1 to 7 days before delivery. Repeated application of corticosteroids in pregnant women with threatening preterm delivery for at least 7 days after the last application has led to a reduction of the minimum respiratory distress. ● Tyrotropni releasing hormone (TRH). 6) Antibiotics - A meta-analysis has shown that the use of antibiotics in women with signs of preterm labor, without clinical signs of infection,

with preserved broke resulted in no improvement of neonatal outcomes, and could contribute to the adverse effect of antibiotics on the health of the newborn. The routine application of antibiotics in the case of premature rupture of fetal membranes is therefore to be understood, but, in the selection of antibiotics should be avoided, amoxycillin with clavulanic acid, for its application may lead to increased risk of developing necrotizing enterocolitis in the neonate. 7) Cerclage - in one meta-analysis shows that the cerclage, progesterone vaginal pessary and have a similar effect in women with singleton pregnancies and previous spontaneous preterm birth and the part of the cervix. 8) Other medications – DHA, selenium, vitamin D, folate - Ambroxol- 14 in smaller studies was compared frequency preterm labor in the group of women using Ambroxol with those used cortikosteroide and placebo groups. Further research is needed to be said about the effectiveness of such treatment. 9) Oxygenation. 10) The treatment of oral infections. **Material and Methods:** We analyzed data from the maternity clinic In Banjaluka in 1.1.2012. to 31.12.2016 years. The obtained results are comparated in relation to the age of gestation, number of deliveries, as well as the delivery mode. **Results:**

Table b.1 To all delivery / preterm birth 2012-2016 years

Years	n PB	N delivery	%
2012	220	3176	6,9
2013	253	3093	8,1
2014	194	3097	6,2
2015	201	3187	6,3
2016	247	3302	7,4
Too all	1115	15 855	6,98

The frequency early preterm delivery to 31.6 weeks of gestation was 2012/1,22%, 2013/:1,19% 2014/1,03% 2015/1,78 % 2016/1,88%. Number of early preterm delivery for 5 years was 227, or 1.43%, of which 59.03% is completed by caesarean section, and 40, 96% of the vaginal route. **Conclusions:** In addition to the progress of diagnosis and treatment in modern obstetrics prematurity remains a major problem. Fact is that the number of survival of preterm infants has increased substantially in recent times, due to the use of modern diagnostics and therapy as in obstetrics and in neonatology. Many doubts are still outstanding and require further analysis.

ASHERMAN SYNDROME

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Objective: To study the success of centralized hysteroscopic adhaesiolysis in patients with Asherman Syndrome (AS). DESIGN: Prospective cohort. SETTING: 2 University-affiliated hospitals. PATIENT(S): A total of 638 women with AS were included, all diagnosed using hysteroscopy, and operated on between 2003 and 2013. In all patients a pregnancy related procedure preceded. INTERVENTION(S): Hysteroscopic adhaesiolysis and second-look hysteroscopy two months later. **Main outcome measure(s):** Hysteroscopic adhaesiolysis (was classified as successful if a normalization of menstrual blood flow occurred, along with a restored cavity anatomy, free of adhaesions, with hysteroscopic visualization of ≥1 tubal ostium. Recurrences of adhaesions were diagnosed during hysteroscopy after an initial successful procedure. **Result(s):** The procedure was successful in 606 (95.0%) women; 80.4% in 1, 12.4% in 2 and 2.2% in 3 procedures. In 7 (0.1%) patients we were not able to restore the uterine cavity and 25 (3.9%) patients stopped their treatment voluntary. IUAs spontaneously recurred in 174 (27.3%) patients after treatment. High grades of adhaesions were predictive of a higher chance of spontaneous recurrence of adhaesions. All 638 women were approached to follow up on their fertility and live births. In 460 patients follow up was closed of which 425 had procreative desires. In these 425 women 490 pregnancies occurred (31.0% miscarriages, 0.8%ectopics, 0.4% immature deliveries and 67.8% life births). In 36.5% of the patients a postpartum complication occurred. Earlier miscarriages and treatment for spontaneous recurred adhaesions were in a multivariate analysis not related to the chance to conceive. Pregnancy rate, however, was positively related to age, the cause of adhaesions, the grade of adhaesions and the results of the adhaesiolysis. **Conclusion(s**): In this large cohort (the largest ever described) hysteroscopic adhaesiolysis can be very successful with a restored uterine cavity in at least 95% of women with AS. These women have a normal chance to deliver a living child, however, with an increased risk for postpartum complications.

ENDOMETRIAL SCRATCHING

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Success rates of assisted reproductive techniques (ART) are approximately 30%, with the most important limiting factor being embryo implantation. Mechanical endometrial injury, also called 'scratching', has been proposed to positively affect the chance of implantation based on unknown biological effects, but the currently available evidence is not yet conclusive. In a recent Cochrane analysis nine randomised controlled trials met the inclusion criteria for review, and a total of 1512 women were included. The women in seven studies were trying to get pregnant from IUI, and from intercourse in two studies. The results from the included studies suggest a beneficial effect of endometrial injury on the chance of getting pregnant. Multiple studies have been performed also to investigate the effect of endometrial scratching on live birth rates in women undergoing IVF/ICSI cycles. All studies are associated with many significant limitations. The quality of the evidence is low. In general, the studies included were not very well designed and did not recruit a high enough number of women to provide meaningful results. Therefore, due to heterogeneity in both the method and population being scratched it is still not possible to say with any confidence whether endometrial injury can increase the probability of pregnancy. It is uncertain whether endometrial injury increases the probability of a live birth or a pregnancy beyond 12 weeks and it remains unclear which group of women will benefit from the procedure. Furthermore, the endometrial injury procedure is known to cause a degree of temporary pain or discomfort. Only one study reported on whether the women experienced pain during the procedure, and the average pain experienced was six out of 10 on a visual scale from zero to 10. Endometrial injury does not seem to have an effect on miscarriage, ectopic pregnancy or multiple pregnancy. No studies reported bleeding after the procedure. Overall until now it seems unlogical or even enethical to perform endometrial scratching as a routine procedure and it seems only justified investigational in further studies that are needed. A multicenter randomized controlled trial in Dutch academic and non-academic hospitals started in January 2016 (SCRaTCH trial NTR5342). A total of 900 women will be included of whom half will undergo an endometrial scratch in the luteal phase of the cycle prior to controlled ovarian hyperstimulation using an endometrial biopsy catheter. Until now more than 500 patients are recruited. The primary aim of this study is to determine the effect of endometrial scratching prior to a second fresh in vitro fertilization/intracytoplasmic sperm injection (IVF/ICSI) cycle on live birth rates in women with a failed first IVF/ICSI cycle. The primary endpoint is the live birth rate after the 2nd fresh IVF/ICSI cycle. Secondary endpoints are costs, cumulative live birth rate (after the full 2nd IVF/ICSI cycle and over 12 months of follow-up); clinical and ongoing pregnancy rate; multiple pregnancy rate; miscarriage rate and endometrial tissue parameters associated with implantation failure.

UTERINE FIBROIDS: MEDICAL TREATMENT FOR ALL

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Uterine fibroids are the most common benign gynecological tumors. Nearly 60% of women will develop leiomyomas during their reproductive years, and they can suffer a wide range of clinical manifestations: heavy menstrual bleeding, pelvic masses, pain or infertility. Since not so many years ago, surgery has been the first-line therapy for women with symptomatic uterine fibroids, and the available options were limited to perform a hysterectomy or a myomectomy depending on the desire for future pregnancies. This approach represents an elevated health care cost and it also adds the costs inherent to the patient's recovery time. The pharmacological treatment has always been a second-line therapy. GnRH agonists have been used to shrink fibroids and restore hemoglobin levels in symptomatic women, but because of their side effects, they cannot be used for long periods of time. With the development of Selective Progesterone Receptor Modulators (SPRMs) the management of uterine fibroids has changed drastically. There is evidence from preclinical and clinical trials, as well as from histological and pharmacological studies, that progesterone and its receptors play a key role in uterine fibroid growth. SPRMs are synthetic compounds that exert either an agonistic or antagonistic effect on PRs. Among SPRMs, Ulipristal Acetate (UPA) has proven to be effective and safe for the treatment of this disease. Clinical phase III trials PEARL I (UPA vs placebo) & PEARL II (UPA vs Leuprolide Acetate) revealed an effective and quick control of the bleeding symptoms on those patients treated with UPA, with no differences from the group that received GnRH analog Leuprolide Acetate. PEARL III (with its 2 extensions) and PEARL IV study demonstrated the safety and efficacy of the long term repeated intermittent treatment with UPA. With data, up to eight 3-month-courses of UPA, these studies demonstrated that this repeated treatment effectively control bleeding and pain, and reduced fibroid

volume. Both PEARL III and IV studies also showed a cumulative size reduction of fibroid volume course after course without size recovery during periods without treatment. With all the results from the PEARL studies, the European Medicine Agency (EMA) has approved two main indications for treatment of symptomatic fibroids: 1) Up to two 12-week courses as a pre-operative treatment, and 2) long term repeated intermittent treatment for those women willing to avoid surgery. With those indications, many gynecological societies guidelines have added UPA on the management algorithms of symptomatic uterine fibroids. The management of fibroids will depend on several key factors such as severity of symptoms, age, childbearing aspirations, size and location of the fibroids, and the patient should be aware of all treatments available to treat their disease. Surgery has for sure a place for some patients with large intracavitary myomas or for those who not respond to medical treatments. But, according to the results of studies with UPA, and with the new therapeutic regimes approved by the EMA, medical management should be offered as a first-line therapy for uterine fibroids in selected patients.

CAN WE USE ANTIBIOTICS FOR PROPHYLAXIS WITHOUT LONG TERM OUTCOMES OF THE NEONATES?

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Should antibiotics used in pregnancy considered in the same way of using vitamins in pregnancy? The short answer is yes as all drugs should be used in pregnancy with an analysis of risks Vs. benefit. Many physicians looked at both classes of medicines with the approach that the more the better. Recent studies suggested that he use of Vitamins such as vitamin E are not only not helpful as anti-oxidants but carry a risk of worsening outcomes (Rumbold A and Crowther CA 2008). There is such data now for antibiotics as well. **Misuse of antibiotics –** The FDA classifies antibiotics into 5 groups. Group A are drugs with no risk (no drug belongs to that group) Group B are relatively safe for the fetus; C – Risk unknown and D with prominent risk. X are drugs that should never be used. A recent German study showed that antibiotics were used in 20% of pregnancies and in 1.7% they were misused (Amman U et al 2006). **Risk of teratogenicity** –The common concern is for new antibiotics; While we feel that we are aware of the risk of the old ones. However, a relatively recent study of 2009 by Crider KS et al found an increased risk of teratogencity of Sulfa and Nitrofurantoin; two common drugs that are used for chemoprophylaxis of bacteruria and UTI's. The risk for anomalies associated with these drugs were increased x2-3. However, these results should be viewed with caution as this study may have a major recollection bias. **Risk of creating resistant bacteria –** The use of antibiotics leads to a selection of more resilient bacteria. The deaths from resistant bacteria are in the range of 20,000 per year. A use for the wrong indication such as a clinical disease caused by a virus and chemoptophylaxis that would aid only few babies with a bacterial shift in more babies and mothers should be revaluated in order to prevent many more mortalities and morbidities due to resistant bacteria. For example, the risk of early neonatal GBS infection in Canada is about 1:2,000 babies. Antibiotics prophylaxis for GBS is used in about 35% of Canadian women (30% are GBS(+) and 5% have preterm labours. Thus 700 babies and 700 mothers are treated to prevent one such case. The author is note sure that this risk has been properly evaluated prior to introduction of guidelines promoting universal prophylaxis in women with positive cultures and PTL. **Risk of eliminating protective bacterial flora** – Antibiotics will eliminate all susceptible bacteria. Thus bacteria that are not pathogenic but saprophytic or even helpful may be eliminated. There is data suggesting that such an effect may have long term effect on the well-being of the child. For example, Foliaki S et al. described in 2009 an association between antibiotics use and later development of allergies and asthma in infants. **Is it the therapy or the primary disease? -** A Norwegian study By Norgaard M et al found in 2012 an increased risk of childhood epilepsy following maternal infections treated with antibiotics. There was no difference in the effect of the antibiotic taken and the authors concluded that it was much more likely the effect of the maternal disease that led to the poor outcome than the use of any specific antibiotics. **Can guidelines change in order to reduce the risk of antibiotics?** A good example of such guidelines is that of the antibiotics prophylaxis of women with congenital heart diseases. The American Heart Association has changed its guidelines for use of antibiotics in labour in women with congenial heart diseases in 2008. The new guidelines eliminated the need to use antibiotics in most of these patients. This change did not result in an increased infectious morbidity. **Is it an infection or inflammation?** This has become a major issue for consideration of antibiotics therapy that stemmed for the second ORACLE study done by Sara Kenyon et al in 2001. The initial study randomized patient in threatened preterm labour with intact membranes into receiving antibiotics or placebo. The initial study did not demonstrate any significant differences in outcomes between the therapy groups and the placebo group. However, a follow-up study that was published in the Lancet 8 years later had quite a significant difference in the outcome of the babies (n=3,196). The frequency of cerebral palsy (CP was significantly higher in the treatment groups. The incidence of CP was 3.3% in the Erythromycin group vs. 1.7% in the control group and the risk in the Augmentin (Clavulinic acid + Co amoxicillin) was 3.2% vs. 1.9%. Thus, the need to harm was 1:64 in the erythromycin group and 1:79 in the Augmentin group. These results proved that antibiotics may not just improve outcome in these babies but cause harm. The possible mechanism for this effect was that the infection was suppressed but not the inflammation and the harm was done by that mechanism. These new data may suggest that we need to re-evaluate our indications for the use of antibiotics in pregnancy. While therapy of an infection is likely to be helpful the use of prophylactic antibiotics may be harmful not only to the babies and mothers that were at risk but would have not developed any infection but at times to those who had an inflammatory process. **Long term outcome of CS:** There is a link between birth by a CS to a variety of long term poor outcomes. These include: • Type 1 diabetes, • Obesity, • Asthma, • Atopic dermatitis, •Cancer (Acute Lymphatic Leukemia). The mechanism for these increased rates of long term morbidity are not clear. The two leading theories are: 1. Passage of the baby through the birth canal exposes the baby to the vaginal flora and acquiring some of this flora reduces the risks. 2. Antibiotics (that is almost invariably administrated in CS. **The microbiome:** There has been awareness to this concept for more than 10 years. It started with GI diseases and conditions but now it is relevant to all fields of medicine including obstetrics. Furthermore, we know now that are different microbiomes and the bacteria in the gut are different than those of the vagina and the oropharynx. This created interesting and new understanding of common conditions. For example, there is evidence that chorioamnionitis is closer to the mouth microbiome that that of the vagina. Another interesting observation is that treating asymptomatic bacteruria (the treatment of choice for the last 50 years alters the vaginal microbiome throughout pregnancy.

AMNIOTIC FLUID EMBOLISM: MYTHS AND MISUNDERSTANDING

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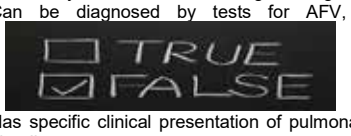
History of AFE:

- 1926 - Ricardo Meyer found fetal cellular debris in the maternal circulation
- 1941 - Steiner and Luschbaugh found mucin, amorphous eosinophilic material, and squamous cells in 8 multiparous women dying of sudden shock during labor.
- Findings up to 1950 – Only 17 cases
- 1957 – Entity recognized and labelled

What do we think we know about AFE?

- Caused by Amniotic fluid reaching the lungs
- Can be diagnosed by tests for AFV, masts cells etc.



- Has specific clinical presentation of pulmonary dysfunction and bleeding
- Mortality – 90%

AFE – Risk factors:

- Multiparity
- Abruption
- IUFD
- Post dates
- Tumultuous labour
- Hyperstimulation
- Removal of placenta
- CS
- In US registry 41% had hx of allergies
- Non-Hispanic blacks x2.5

Incidence of AFE:

Author	Year published	Incidence (per100000 maternities)	Case fatality rate (%)
Knight	2012	1.9-6.1	11-43
Knight	2010	2.0	20
Abenhaim	2008	7.7	21.6
Tuffnell	2005	Not reported	29.5
Gilbert	1999	4.8	26.4
Clark	1996	Not reported	61
Burrows	1995	3.4	22
Morgan [1]	1979	Not reported	86

What are implications of variability in incidence and mortality?

- Mortality –
  - Effected by diagnostic criteria (e.g. lung cytology implies death or Swan Gants
  - Reduced from 80-90% to about 20% mainly by ICU improved care
- Incidence-
  - May imply different populations, risks care etc.
  - Based on diagnostic criteria or lack of

Diagnosis of AFE:

- Amniotic fluid in lungs:
  - Not present in 27% of deaths from AFE
  - Only in 25% of clinically diagnosed (Hankins 2002)
  - Present in 5% of healthy patients
  - AFV by itself is benign. Contamination with meconium/debris is needed for starting a cascade
- Tests for mast cells or complement activation –useless
- CLINICAL DIAGNOSIS – SMFM bulletin #9 2015
- **Let us be careful not to make it (diagnosis of AFE) the waste basket of all cases of unexplained deaths in pregnancy Eastman NJ (**Editor of Williams obstetrics 1950)

Prognosis:

- Death:
  - AFE account for 14% of maternal deaths in the US (Clark 2008) and 16% of the UK
  - Death Rate: Clark 1995 - 60%
  - Gilbert 1999 – 25%
- Only 8% of women with cardiac arrest have intact neurological survival (Clark 1995)
- Neonatal outcome – 70% have residual damage

SMFM and AFE Criteria for diagnosing AFE:

1. Sudden onset of cardiorespiratory arrest or both hypotension (<90mmHg) and respiratory compromise
2. Overt DIC following this (before blood loss could explain DIC)
3. Clinical onset in labor or within 30 min from placental delivery
4. No fever (>38 C) in labor

Other Societies Criteria:

- UK (June 2016) – Clinical presentation (acute hypotension or arrest, acute hypoxemia or coagulopathy) with no other explanation OR post mortem findings of hair or sqames in lung
- Australia (June 2016) – Same
- Japan (June 2016) – Symptoms in pregnancy or <12 hrs fro delivery; one ore more of: arrest, bleeding>150cc, DIC or resp. failure. No other etiologies

Differential diagnosis:

- Hemorrhage
- Sepsis
- Anesthetic accident
- Pulmonary thromboembolism
- Systemic anaphylaxis

Management:

POSTPARTUM MANAGEMENT (PPH): FIGO ADVICES
FIGO – INTERNATIONAL FEDERATION OF GYNECOLOGY AND OBSTETRICS

Draft by: **Dan Farine**
University of Toronto, Canada

This draft of a FIGO document is dedicated to our friend Louis Keith (1935-2014) who had many achievements including being an editor of the only textbook on PPH.

Objective: To create FIGO advices on different aspects of PPH. These include: planning for PPH prevention at different levels, deciding on resources to be allocated to the prevention of PPH, prevention of PPH in individual parturients, management of PPH. **Methods**: a systematic review of the evidence on PPH including review and peer-reviewed papers, Cochrane Reviews, textbooks on PPH and bleeding, government publications, and statements from others Societies are used to develop a new clinical practice statements/recommendations of the International Federation of Gynecology and Obstetrics. **Results**: This FIGO document is not a protocol on the management of PPH. It is not even guidelines on managing PPH. This document is to be used along with local or national guidelines to develop the planning of prevention of PPH from intuitional perspectives as well as clinical guidelines for the prevention and management of PPH. **Recommendation**: The International Federation of Gynecology and Obstetrics represented by the Working Group on Best Practice on Maternal-Fetal Medicine recommends that specific planning for prevention and management of PPH should occur on all levels of the medical system. Attention should be paid for creating an optimal infrastructure for prevention and management of PPH; the optimal protocols for a range of issues starting with teaching and education, quick accessibility to blood products, assessment of blood loss, administration of blood products and finally specific clinical guidelines on prevention and management of PPH

Key Words: hemorrhage – postpartum, pregnancy, pregnancy complications, shock, blood products. **Introduction:** Post-partum Hemorrhage (PPH) is one of the worst obstetrical complications. It is a major contributor to maternal death. The number of women dying in the developing world is very high and estimated at 200,000/year. In the developed world, it is also one on the major contributor to mortality and its frequency seems to be on the rise. The consequences of PPH could include

The literature on PPH is very extensive. There are several recent textbooks on obstetrical bleeding and one dedicated solely to PPH with a recent edition last year. The number of papers on this topic in Medline exceeds 5,000. There are more than 50 national and international guidelines and few hundred reviews. The purpose of these guidelines is not to publish another review on the topic but to provide a document that will facilitate the development of protocols in hospital, regions and even countries. There are more than 50 guidelines on PPH published by different national societies the WHO and two by FIGO. The purpose of this document is to look at the different aspects of PPH address issues that are often neglected in planning the resources and strategies of improving outcome and provide the best evidence from recent literature for patient management. **Methods:** A systematic review of the evidence on PPH published, including randomized control trial, review and peer-reviewed papers, Cochrane reviews, government publications, and statements from other societies are used to develop the statements / recommendations. **ADVANCED PLANNING:** Creating the optimal set-up for improving outcome of PPH:

1. **Specific protocols** (Creating unit/city/province) – having such protocols allows for selection of the right devices and training and optimizing the resources. Such protocols will force the consideration of the issues outlined below. Specific issues resulting from such protocols: a) Part of such a protocol should be a PPH cart that could be brought to the room of women at risk or when PPH occurs unexpectedly (usually defined as 500cc or 1000cc for severe PPH). b) Blood collection sheets – These should be used in bleeding patients to provide proper.
2. **Blood services** – The main reason for death in PPH is not coping with the blood loss. Countries/regions/Hospital/units should attempt to have an adequate blood supply for emergencies such as PPH. Even in developed countries with proper blood bank there may be an issue of supply in acute cases. Each hospital should have a code and a protocol for massive bleeding. When this code is called several different steps occur in parallel. These include: a) Diverting human resources to this specific patient(s) – for example at nigh time routine blood typing is delayed and another technician may be called from home. b) A commitment to provide that many units of packed cells and other blood components within a defined short time to the team dealing with the bleeding patients. c) The ability to do rapid testing of the relevant tests (CBC, cross and type, coagulation etc.). This allows therapy, especially of blood components to be directed based on laboratory results rather than clinical impression alone.
3. **Blood administration protocols**: These protocols should not be necessarily obstetrical and probably should be hospital based ones. Our approach to the use of blood and its components has been unchanged for long time. Since the Iraq and Afghanistan wars, there has been a change in the management of shock secondary to hemorrhage. The new protocols were not designed for obstetrical bleeding but are probably superior to the older ones. A full description of these new protocols is out of the scope of this document. However, some of the key issues are:

1. More judicious use of blood components
2. Attention to warm blood products (to increase the effectiveness of the clotting factor)
3. The goal of therapy is not to restore the blood pressure but to keep it on the lower-normal side
4. Keep the pH at non-acidotic level

These new guidelines have several practical implications such as having blood warmers on the labour floor and checking pH.

In addition, there need to be some directives as to when use unmatched O (-) blood

4. Training and PPH drills: There is now some evidence that PPH drills allow for a more efficient management of this complication and improved out. There are now several different bodies that provide this service in isolation or as part of a total obstetrical package. There is no evidence that any of these is superior to the others. It is also possible to develop one own manual of training to avoid the costs of

the established ones. There are now some superb programs using mannequins but this is too expensive for most units. We recommend that such drills should be part of an ongoing program and not a one-time event. Although there is no good data on the optimal frequency of these drills they should be done yearly or more frequently (mainly because of turnover of providers). There are several elements that are important to the success of such a program: a) All obstetrical care givers have to be included and all should attend the same sessions. b) Learning. material has to be given to all attendees before the drill. c) Pre and post drill examination should be provided. d) A certificate should be given who passed the post drill test.

5. Low cost Vs. High cost care: We all live in a world with limited resources. This is a more significant issue for the developing world where health care dollars are scarce but even in the developed world thought should be given to resources. The protocols for management of PPH should be specifically designed with this concept in mind even in high resources environment. Few examples in different categories are provided to illustrate this issue: a) **Drugs:** Some drugs are really expensive to the tune of several thousand dollars such as Factor VII while other drugs such as misoprostol cost less than a dollar. b) **Devices**: Intra-uterine balloons cost few hundred dollars. The same effect could be achieved with a modified surgical glove and a Foley catheter for a fraction of the cost (as described by Arulkumaran). Similarly, packing of the uterus can also achieve the same effect with a low cost. c) **Invasive radiology**: This is a great addition to both prevention and therapy but it comes at a price that many countries, regions and hospitals cannot afford.

6. Invasive radiology: This is an excellent adjunct to the management of PPH. It could be used prophylactically in patients who are expected to have a PPH (e.g. placenta accreta) or to supplement other treatment modalities and often to eliminate the need for surgery in an unstable patient. In general, invasive radiology is a service that addresses many other issues unrelated to obstetrics and gynecology. Therefore, the decision of establishing it is outside the scope of an obstetrical team. Its use and limitations should be studied by such a team. The major one is the time required to have a team on site. A long lag period may render this solution impractical. It also may result in a need to call such a team earlier when other therapies are still attempted.

7. **Cell sorter** – In a patient with a massive bleeding an immediate source of matched blood is the blood exsanguinated. A major risk is of an infection introduced directly into the circulation. Another that is often forgotten is the risk of iatrogenic amniotic fluid embolism. A way to use the blood practically avoiding these risks is a cell sorter. It is often used by large oncology units and it could be borrowed for obstetrical emergencies. However, a mechanism of doing that need to be discussed by the relevant services and a mechanism for doing it (especially at night time when it is practically never used) needs to be established. Purchasing a cell sorter for obstetrical uses is expensive and not practical for most units.

8. **Invasive placenta protocol** – The frequency of placenta accreta in the developed world is increasing exponentially. And it is a major contributor for the increased frequency of severe PPH and mortality. A protocol for management of placenta accreta may improve outcome as it could be diagnosed before labour turning a catastrophic obstetrical case into a manageable one. A full discussion of these protocols is outside the scope of this document but the following elements should be considered: a) Patients with precious Cesarean deliveries (CS) are at increased risk especially if they had few of these. b) A combination of previous CS and an anterior placenta mandates a careful attention during any ultrasound scan and more so in the anatomy scan or early anatomy scan. Any suspicious finding for placenta accreta should be followed by a targeted ultrasound in expert hands and/or a MRI. None of the current guidelines mandate ruling in (or out) of accreta. However, some of the current guidelines do suggest looking for this pathology (UK and Australia NZ). c) Tertiary or large centers should consider the creation of an accreta team and clinic involving relevant experts (ultrasound, MRI, invasive radiology, urology, expert pelvic surgeons etc.) to plan electively and collectively the management of patients with invasive placenta. d) Elective CS close to term with the proper team (pelvic surgeon(s), dedicated anaesthetist, invasive radiology, several blood units and urology if needed

9. **Post-partum care** – many of these patients need to be intubated and may complications such as ARDS, DIC and Sheehan Syndrome to mention a few. Decisions and criteria for the need of ICU need to be developed preferably with collaboration of the intensivists, anaesthesia and other relevant services. Similarly, consideration for transfer to a tertiary care need to be developed in primary centers.

10. **Ruptured uterus and inverted uterus** - There need to be protocols addressing the issues of ruptured uterus and inverted uterus. A large portion of the PPH protocol should be used with these specific pathologies. However, a full discussion of these issues is out of the scope of this document.

PREVENTION OF PPH: It is obviously preferable to prevent PPH or be aware of the presence of risk factors instead of confronting these as an acute and major complication or catastrophe. Prevention could be exercised in the ante-partum period and/or in the intrapartum period.

Antepartum:

1. Review risk factors for obstetrical bleeding and bleeding disorders.
2. Look for adherent placenta in women with previous CS and anterior placenta.
3. Close to term look for obstetrical risk factors for bleeding that include: large uterus (multiple pregnancy, polyhydramnios), women who will require long induction, previous fast labor.
4. Look for patients with low hemoglobin and try to correct the anemia ante-partum.
5. Autologous blood collection – could be performed in special cases (e.g. Jehovah Witnesses); however, in most cases only a limited amount of blood could be collected and its effect on massive PPH would be limited.

Intrapartum:

Active management of the third stage of labour is the best way to avoid PPH and has been described about 50 years ago. It includes 3 elements: cutting the umbilical cord The Cochrane library has several reviews that look at the active management of the third stage looking at the following outcomes: average blood loss, blood loss>500cc, Blood loss >1,000 cc and low Hemoglobin at 1-2 days post-partum. In all of these parameters there was a benefit with active management. Its success rate is about 60% in all these parameters

There are probably two possible variations to the active management regarding cord clamping and which oxytocic to use.

1. Cord clamping – Delayed cord clamping was introduced initially with premature babies but was shown to have benefits in the term baby as well. A meta-analysis of recent papers showed that there are advantages to the baby in terms of the Erythrome and minimal risk for PPH. However, in cases where the accoucheur can see active bleeding (either in vaginal delivery or a CS) he or she has the option of “milking” the cord. The benefits of cord milking and delayed cord clamping are quite similar
2. The choice of oxytocic – Practically every oxytocic that is used for the therapy of PPH was tried for prevention as well. Few require some discussion:

a. Oxytocin – This is the most commonly used oxytocic in obstetrics and all the classical studies were performed with this drug. Recent data documented that a rapid administration of oxytocin can cause hypotension that may further compound the effects of PPH. Therefore, it is recommended that it is given slowly

b. Carbetocin – This is a modified oxytocin molecule. The effect of the change in the molecule leads to resistance to degradation and a longer and more sustained activity. Almost all studies and all meta-analyses showed that it is superior to other oxytocics (oxytocine, ergonovine, methergine, misoprostol, prostaglandins etc.). None of these studies showed that any of the other drugs is superior to Carbetocin and generally the side effects are more frequent and significant with the other drugs. The Canadian (SOGC) guidelines call for the use of Carbetocin in elective CS and in vaginal delivery with risk factor for PPH.

c. Misoprostol – This is the only drug that could be used in setting where refrigeration and IV infusion are not available (which is a large portion of the developing world. It could be given orally or vaginally but the rectal administration has the benefit of not being expelled by bleeding as by the vaginal route or cause more GI symptoms as in the oral route.

In the developed world Carbetocin may the oxytocic of choice because of its sustained and better activity. Its cost is higher than oxytocin but when factoring the costs of PPH (mainly care givers time) the costs may be similar or lower. In the developing world oxytocin may provide the best solution. Misoprostol is currently the only agent that could be used in rural under – developed areas.

Management of PPH: There is no simple universal scheme of managing PPH as the resources and the expertise may vary between different countries, regions and centers. However, several themes should be universal.

Basic concepts:

1. Etiology – Although a large portion of PPHs are due to uterine atony other primary etiologies such as tears and retained placenta should be considered. These could be at time present along with atony. Other less common etiologies should be considered (e.g. accreta).
2. Blood loss Vs. Hemodynamic status – Both need to be monitored. Blood loss is often underestimated by care givers. The use of collecting sheet for blood loss is useful in the bleeding patient. If available automated machines for blood pressure and pulse should be used in the bleeding patient
3. Help and planning – A call for help is generally a must. The decision on who to call should be based on clinical need and availability. It is important to plan few steps ahead and have key relevant specialists (pelvic surgeon, invasive radiology, hematology) called earlier than later.
4. Buying time– In parallel to establishing a diagnosis and assessing blood loss an attempt should be made to slow or stop the bleeding temporarily. Compression of the uterus (both in vaginal delivery and CS) may stop or slow down. In CS, these are several other options

that include: lifting the uterus, twisting the uterus and compressing the aorta.
5. Aggressive management – These should always include:
- Two large bore IVs
- Foley catheter insertion after a short period of therapy
- Continuous vital signs (temperature q15 min)
- Laboratory work including cross and typing, coagulation profile, pH and electrolyte, LFT and RFTs.
- A dedicated person to chart the management.
- One person should be in charge of the management and its coordination.
6. There should be allocation of personal to take care of the baby and communicate with the partner and the family.

Therapy options: There are several different options for controlling and stopping the bleeding. In general one should try medical therapy first, compression technique next and surgical and/or invasive radiology last. Obviously, these could be used either sequentially or in parallel. There are too many permutations of these especially considering the variability in setting, resources and available techniques.

I. Medical therapy (most are off license or label):
1. Oxytocin – A continuous IV drip of concentrations of up to 40U/l. A single dose could be administered slowly or IM (Note that this is different from the 10U recommended by the FIGO guidelines of 2003)
2. Misoprotol – May be added to oxytocin or used alone in low resource setting or home births. Note that the FIGO guidelines recommended sublingual dose while now there is good evidence to use the rectal route
3. Prostagladin F2 alpha – Best injected to the uterus. May aggravate asthma and mimic amniotic fluid embolism
4. Dinoprostone (Prostin E2) supposartory. Contraindicated in hypotension. Needs to be thawed
5. Methylergonovine - Should not be used in hypertensive patients
6. Methergin - A combination of oxytocin and ergonovine. Should not be used in hypertensive patients
7. Transanemic acid – antifibronolytic with mixed results
8. Factor VII – it is very expensive (few thousands $) ; requires fibrinogen to act ; requires consultation with hematologists
9. Nano particles (not in used in humans yet)

II. Compression techniques:
1. Bakri or similar balloons may exert pressure on the endometrium and along agents that contract the uterus may stop the bleeding
2. Foley catheter and a surgical glove – The "Cheap version" of the balloons. There is anecdotal evidence it works better than the balloons (as it may accommodate a larger volume and may adjust better to the contours of the uterus)
3. Packing of the uterus – The technique is to tie two large abdominal packs and pour Acroflavin or similar oily solution and pack the uterus very tight. The packing should be removed about 24 hours later. This simple technique has very good results. It was almost abandoned 40 years ago because of concerns of blood accumulating behind the packing. This can be ruled out with scans and this approach which is especially suitable for low resources area is re-emerging.

III. Surgical approaches:
These require a laparotomy in a bleeding patient who may not be stable. If the patient has already a CS this concern is not an issue.
The possible surgical techniques:
1. Ligating the internal ileac artery – This require knowledge of the retroperitoneal area. One has to check before tying that it was not the external iliac that is compressed
2. Deep stitches in the placental bed – May achieve hemostasis fast (especially in mild forms of accreta
3. Ligation of the uterine arteries – A single large stich to the each of lateral aspect of the uterus after it was lifted to protect the ureters.
4. Variations to the B-Lynch suture
5. Hysterectomy –In cases of accreta the alternative is to leave the placenta in situ.
6. The ovarian artery – the descending branch may have to be tied at times along with the uterine surgery

IV. Invasive radiology:
It could be used prophylactically when there is a pathology that may result in major bleeding (e.g. accreta). In cases of unexpected PPH, as often is the case, the obstetrical team has to be cognisant of the time limitation issue. It takes about 30 minutes to set for the procedure and the time for the team members to arrive to the hospital should be added if not at working hours.
There different degrees of embolization, super selective, selective and non- selective but the techniques and their selection should be left to the discretion of the radiology team

V. Blood component management – The new protocols should be considered but specific recommendation is out of the scope of this document

VI. Pneumatic trousers – Could be useful in the hypovolemic patient. Their use has been covered by previous FIGO guidelines

VII. Cell sorters – may be very helpful but as most units will not have this a discussion is out of the scope of the document.

Recommendations/ Advices
The International Federation of Gynecology and Obstetrics (FIGO) recommends that:
1. Planning for the prevention and management of PPH should be done on all level starting with the national ones and ending with any medical facility proving intra-partum care
2. Planning is needed in a variety of different areas. The infrastructure and how to integrate different disciplines (radiology for embolization, hematology for clinical protocols and cell sorters and blood bank for availability of blood products). Decisions on high cost and low cost options have to be made; Proper ongoing education has to be planned and provided; specific protocols for prevention and management of PPH have to be developed.
3. This set of FIGO recommendations/advices should be used as a template to address all these different issues outlined above. Specific guidelines and protocols need to be developed based on this template, available resources and national guidelines

Current guidelines for prevention and management of PPH:
World Health Organization (WHO). WHO recommendations for the prevention of postpartum haemorrhage. Geneva, Switzerland: World Health Organization (WHO); 2007. 116 p. www.**guideline**.gov/content.aspx?id=39383
Prevention and management of PPH: Royal College of Obstetricians and Gynaecologists Green-top Guideline
No. 52 May 2009 Minor revisions November 2009 and April 2011
https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg52/
Royal College of Obstetricians and Gynaecologists. Blood Transfusion in Obstetrics. Green-top Guideline No. 47.London RCOG; 2007 [www.rcog.org.uk/womens-health/clinical-guidance/blood-transfusions-obstetrics-green-top-47].
Management of Postpartum Haemorrhage (PPH). The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. First endorsed by RANZCOG: March 2011
Current: March 2014, Amended in May 2015
https://www.ranzcog.edu.au/.../management-of-**postpartum-haemorrhage**
Postpartum hemorrhage. American College of Obstetricians and Gynecologists (ACOG). 2006 Oct. 10 p. (ACOG practice bulletin; no. 76).
www.**guideline**.gov/content.aspx?id=10922
Active management of the third stage of labour: prevention and treatment of postpartum hemorrhage #235 - Published October 2009
http://sogc.org/guidelines/active-management-of-the-third-stage-of-labour-prevention-and-treatment-of-postpartum-hemorrhage/
Primary postpartum haemorrhage clinical practice guidelines. Prevention and management of primary postpartum haemorrage Institute of Obstetricians and Gynecologists Royal College of Physicians of Ireland and Directorate of Strategy and Clinical Programmes Health Service Executive. Version 1.1 Date of publication: October 2012Guideline No. 17Revision date: May 2014
http://www.hse.ie/eng/about/Who/clinical/natclinprog/obsandgynaeprogramme/postpartumhaem.pdf
FIGO GUIDELINES: Prevention and treatment of postpartum hemorrhage in low-resource settings FIGO Safe Motherhood and Newborn Health (SMNH) Committee.
International Journal of Gynecology and Obstetrics 117 (2012) 108-118
http://www.sigo.it/usr_files/linee-guida-sigo/linee-guida.pdf
FIGO/ICM global initiative to prevent postpartum hemorrhage. #152 2004
http://sogc.org/wp-content/uploads/2013/02/152E-JPS-December2004.pdf
Hémorragies du post-partum. Recommandations pour la pratique clinique Les hémorragies du post-partum. Élaborées par le Collège national des gynécologues et obstétriciens français. 2014
http://www.cngof.asso.fr/data/RCP/CNGOF_2014_HPP.pdf
Management of postpartum hemorrhage (PPH): algorithm of the interdisciplinary D-A-CH consensus group PPH (Germany - Austria - Switzerland)]. Anaesthesist. 2014 Mar;63(3):234-42. doi: 10.1007/s00101-014-2291-1.

NON-INVASIVE PREIMPLANTATION GENETIC SCREENING (NIPGS) ON 24 CHROMOSOMES USING BLASTOCYST CULTURE MEDIA

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The aim of this pilot-study was to assess if array CGH (aCGH), non-invasive preimplantation genetic screening (NIPGS) on blastocyst culture media is feasible. Therefore, aCGH analysis was performed

on twenty-two spent blastocyst culture media samples after polar body preimplantation genetic screening (PGS) because of advanced maternal age. All oocytes were fertilised by ICSI and all embryos underwent assisted hatching. Concordance of polar body analysis and culture media genetic results was assessed. Thirteen out of 18 samples (72.2%) revealed general concordance of ploidy status (euploid/aneuploid). At least one chromosomal aberration was found concordant in 10 out of 15 embryos analysed aneuploid by both polar body and culture media analysis. Overall 17 out of 35 (48,6%) single chromosomal aneuploidies were concordant between the culture media and polar body analysis. By analysing negative controls (oocytes with fertilisation failure) significant maternal contamination was observed. Therefore, NIPGS could serve as a second matrix after polar body or cleavage stage PGS, however in euploid results maternal contamination needs to be considered and results interpreted with caution.

ROLE OF MITOCHONDRIA IN IVF SUCCESS
BOOSTING MITOCHONDRIAL FUNCTION IN OOCYTES INCREASES SUCCESS: NO PROOF HAS YET BEEN PROVIDED
Simon Fishel, UK

Mitochondria are membrane-bound organelles that contain their own DNA (mtDNA) and are essential for various cellular functions; these include initiation of steroidogenesis, providing Ca2+ storage and regulation, the production of energy, and facilitating multifarious cellular activities including apoptosis and cell survival. Amongst other functions, the mtDNA codes for ~16% of the polypeptides involved in the electron transfer chain generating the majority of cellular ATP through oxidative phosphorylation. Maternally inherited large-scale deletions in mtDNA in oocytes are responsible for severe clinical disorders including neuropathies, ataxia, stroke episodes and lactic acidosis. Depleted copies or dysfunctional mitochondria in oocytes, have been linked to reproductive failure such as failed fertilisation, arrested cleavage or poor-quality embryos, and is postulated to be more prevalent in older women seeking ART. During the last two decades, several researchers have attempted to 'rescue' such oocytes by the addition of heterologous mitochondria, although the attendant risks were considerable. More recently, putative autologous mitochondria have been used as a prospect to avoid the severe risk to the health of ensuing offspring whilst boosting embryonic viability. Various strategies have been developed for such clinical therapy such as simple injection either of healthy, donor mitochondria into the ooplasm, or autologous mitochondria - which is utilized in the recently promulgated Augment™ programme, to the more technologically challenging spindle or pronuclear transfer from an affected oocyte into donor oocytes with normal mitochondria. Two overarching reason for mitochondrial transfer are apparent: critically, to find solutions to families with mtDNA cytopathies, but in conventional ART for the still contentious scenario that a cause of embryonic failure is due to compromised mitochondrial function or mtDNA gene expression. The presentation will review the current evidence for enhancing mitochondrial copy number, or modification of its function on clinical outcome, and the evident risks to offspring in some of these strategies.

MITOCHONDRIAL DNA (MTDNA) CAN SERVE AS A BIOMARKER OF PRE-IMPLANTATION EMBRYO VIABILITY
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Problem Statement: It is widely known that the transfer of morphologically good euploid embryos does not necessarily lead to an ongoing pregnancy. mtDNA quantification has recently been proposed as a new biomarker of embryonic viability. Specifically, a relationship was observed between mtDNA copy number and embryonic implantation potential. Data indicated that euploid embryos with mtDNA above a certain threshold were incapable of implantation. This investigation had two aims: a retrospective analysis of the overall value of an established mtDNA threshold in previously completed clinical cases, and the first application of mtDNA quantification in a prospective blinded non-selection setting. **Methods**: Euploid blastocysts had their mtDNA quantities examined in a biopsied trophectoderm (TE) sample with the use of quantitative real-time PCR. Multiple targets on the mitochondrial genome were assessed, and results were normalized with the use of a multicopy nuclear sequence (ALU), to avoid risk of inaccuracies in the obtained data due to allele dropout. The first part of the study involved a blinded retrospective analysis of 1505 blastocysts, whereas the second part was a blinded non-selection study, during which 199 embryos were assessed. A total of 35 IVF clinics participated in these investigations. **Results:** Data from the blinded retrospective analysis demonstrated that 9.2% of all blastocysts had mtDNA levels above previously established thresholds and were therefore predicted to have reduced implantation potential. Clinical outcomes were known for 282 transferred blastocysts, leading to an implantation rate of 65.6%. Normal range mtDNA levels were scored for 249 embryos, and 185 of these led to ongoing pregnancies (implantation rate 74.3%). Elevated mtDNA levels were observed for 33 blastocysts and none of these implanted (100% negative predictive value). A relationship between referring IVF clinic and mtDNA levels in its generated embryos was also identified. The difference between the implantation rates for embryos with normal and elevated mtDNA levels was highly significant ($P < 0.0001$). The inability of blastocysts with elevated mtDNA levels to implant was further confirmed during the blinded non-selection study. Of the 199 blastocysts analysed, 9 (5%) had unusually high mtDNA levels and none of these led to ongoing pregnancies. All remaining embryos had low levels of mtDNA and after transfer 121 (60%) established ongoing pregnancies, 11 (6%) led to biochemical pregnancies, and 10 (5%) spontaneously miscarried. Hence, the ongoing pregnancy rate for morphologically good, euploid blastocysts, with normal/low levels of mtDNA was 64% (121/190), whereas the ongoing pregnancy rate for the same type of embryos, but with elevated mtDNA levels, was 0/9 (0%). This difference was highly statistically significant ($P < 0.0001$). **Conclusion:** Data obtained from the retrospective and the non-selection investigations suggest that mtDNA quantification may have some usefulness as a viability biomarker. It should be noted, however, that the incidence of blastocysts with unusually elevated mtDNA levels is very low (5-10%, depending on the referring clinic). Further functional studies are required into underlying biological cause(s) of elevated mtDNA levels and an enhanced understanding of how they relate to diminished implantation potential would be invaluable.

FETAL CARDIAC INTERVENTIONS: STATE OF THE ART
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Some congenital heart defects (CHD) tend to undergo progression in utero. The more aggressive progression of disease is seen in CHD with severe semilunar valvar obstruction that often results in hypoplasia of the supporting ventricle, thus precluding biventricular circulation (BVC) after delivery and significantly increasing postnatal mortality and morbidity. It has also been proven that restrictive foramen ovale in the setting of hypoplastic left heart syndrome (HLHS) with secondary left atrial hypertension is one of the most critical factors that has a major impact on the outcome of HLHS for both staged reconstruction and heart transplantation. Although significant improvements in survival rates for these conditions have been reported in recent years, others still have discouraging low results in terms of survival with significant ongoing life-long morbidity among survivors. The frustration arising from watching the prenatal progression of these CHD well before fetal maturity has prompted the interest in exploring the feasibility of fetal cardiac intervention (FCI), aiming to improve postnatal surgical options and overall prognosis. Although more procedures will be required postnatally, FCI may ameliorate the natural history of the defect to such an extent that reconstructive biventricular instead of palliative univentricular surgical procedures become possible. However, as for many other in utero invasive procedures, the risks of FCI must be weighed against the potential benefits offered by the technique. The following items must be taken into account systematically before any FCI:

- the cardiac defect should have an unsatisfactory postnatal outcome with high mortality and morbidity
- the cardiac defect should be identified and the intervention undertaken at a fetal age sufficiently early, before the development of irreversible ventricular damage.
- there must be a minimally invasive and technically feasible in utero therapeutic option available with little or no collateral tissue damage
- the mother would not be put at undue risk by the procedure

These points are satisfactorily addressed by three CHD: severe aortic stenosis with evolving HLHS, critical stenosis or atresia of the pulmonary valve with intact ventricular septum (PS-PA/IVS) with evolving hypoplastic right ventricle or heart failure, and HLHS with intact or restrictive atrial septum. The main arguments to support the performance of FCI are first, the restoration of normal flow promotes growth, and reduction in ventricular pressure enables more normal development and function. Second, BVC provides better quality of life than univentricular circulation. The selection of candidates is usually made following a multiparametric system that includes some cardiovascular measurements, basically informing that the ventricle can still be recovered, and some Doppler data reflecting that the case is severe enough to justify FCI. FCI are usually performed with percutaneous access under maternal local anesthesia and general fetal anesthesia. Under continuous ultrasound guidance, a 15-cm-long 18-gauge cannula and stylet needle is advanced through the maternal abdomen into the uterus and from there through the fetal chest wall into the affected ventricle for severe semilunar valve stenosis, or in any of the atria for restrictive/closed foramen ovale. Technical success is defined as successful passage and inflation of a dilating balloon across the semilunar valve, with subsequent improvement in antegrade flow, or successful perforation of interatrial septum, with or without stent placement. Current results show that a

significant proportion of patients who undergo technically successful FCI for severe semilunar valve stenosis have BVC postnatally. Similarly, fetal atrioseptostomy improves neonatal stability in patients with HLHS and restrictive/closed foramen ovale. However, the procedure implies a risk of fetal death, which is highly dependent of the gestational age at intervention and the condition of the affected ventricle.

HOW CAN WE REDUCE THE HRT RELATED BREAST CANCER RISK?

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The degree of association between HRT and breast cancer is controversial. Different progestins have been shown to differently affect breast biology and breast cancer incidence when associated with estrogen administration in the postmenopausal Hormone replacement therapy (HRT). Some progestins as medroxyprogesterone acetate in association with has been shown to induce a modest but significant increase breast tension, mammographic breast density and even breast cancer risk in observational and randomized clinical studies. The attribuibile risk is low and for women using EPT is extra 8 cases per 10.000 women per year. In the WHI study, the unopposed conjugated estrogens (CE) administration in hysterectomized women per 7 years did not increase the breast cancer risk (-7 cases per 10.000 women per year). Other progestins as well as natural progesterone have better or at least neutral effects on breast tissues and cancer incidence. European observational studies show that estradiol administration, alone or in association with micronized progesterone or dydrogesterone is not associated with a significant increase in breast cancer risk, as with other synthetic progestins. High breast density is a moderate risk factor for breast cancer. In addition, increased breast density can significantly reduce the sensitivity and specificity of mammography for breast cancer detection, leading to higher false-negative and false-positive studies. Selective estrogen receptor modulators (SERMs), including tamoxifen, raloxifene (RLX), and bazedoxifene (BZA), have shown a neutral effect or reduction in breast density compared with baseline, HRT or placebo. The tissue selective estrogen complex (TSEC), which pairs BZA 20 mg with CE 0.45 mg is used for treating menopausal symptoms and preventing osteoporosis while protecting women from breast and endometrial stimulation. The TSEC administration increases bone mineral density and improved vasomotor symptoms and vulvar/vaginal atrophy (VVA). In addition, while ensuring endometrial safety BZA+CE administration in clinical studies showed substantial protective breast effects, including no increases in breast tenderness, abnormal mammograms, or breast cancer in comparison to placebo. The association of CE with BZA has the potential to reduce or abolish the breast cancer risk, as suggested from clinical considerations and preclinical data from in vitro and animal studies. Further studies are needed to evaluate the possible reduction of breast cancer incidence in TSEC treated women.

LONG TERM EFFECTS OF VAGINAL ERBIUM LASER ON THE GENITOURINARY SYNDROME OF MENOPAUSE

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The aim of this study was to evaluate the effectiveness and acceptability of Vaginal Erbium Laser (VEL) as a new, second generation, non-ablative photothermal therapy for the treatment of postmenopausal women (PMW) suffering from genitourinary syndrome of menopause (GSM). Methods: GSM was evaluated either with subjective (visual analog scale, VAS) and objective (Vaginal Health Index Score, VHIS) measures. In PMW suffering from stress urinary incontinence (SUI), the International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form (ICIQ-UI SF) was administered before and after VEL treatments. Patients were treated with 3 laser applications, every 30 days, with screening visit prior the first laser treatment (Baseline) and follow up visits after 4, 12 weeks, and 6, 12, 18 and 24 months from the last laser application. Results: VEL treatment induced a significant decrease of VAS of both vaginal dryness and dyspareunia ($p<0.01$), with a significant ($p<0.01$) increase of VHIS. In the 48 patients suffering from mild-moderate SUI the VEL treatment induced a significant ($p<0.01$) decrease in the ICIQ-SF scores. The effects were rapid and long lasting, up to the 12 months of the observation period. VEL was well tolerated with less than 3% of patients discontinuing treatment due to adverse events. Conclusion: This study demonstrates that VEL induces a significant improvement of GSM, including vaginal dryness, dyspareunia and mild-moderate SUI. Thus, VEL is reasonable, efficacious and safe as a new, second generation, non-ablative photothermal therapy for the treatment of GSM. Further controlled studies are required to explore the use of VEL in comparison with different therapeutic options, to offer a procedure in alternative or in association to proven therapies, as a new safe and effective option to treat GSM symptoms in menopausal practice.

PGS: NO EMBRYOS SHOULD BE TESTED

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Recently implemented changes in reporting of preimplantation genetic screening (PGS) results, finally, consider the high prevalence of trophectoderm mosaicism in human embryos by switching from a bivalent, euploid/aneuploid, to a trivalent reporting system of euploid, mosaic and aneuploid. The new intermediate category of mosaic embryos now also created the opportunity of replacing embryos, which until recently were automatically discarded. Transfer of selected mosaic embryos was met with derision from the PGS laboratory community a number of years ago, erroneously claiming that trophectoderm mosaicism was rare. With increasing evidence to the contrary, including healthy euploid, non-mosaic births after such transfers from U.S. and European in vitro fertilization (IVF) centers, new reporting guidelines were published, ranking mosaic embryos for transfer priority mostly based on the number of aneuploid clones detected. A just reported multi-center study, involving the largest so-far reported cohort of mosaic embryo transfers, confirmed surprisingly robust clinical pregnancy rates (live births were not reported), with single monosomies and trisomies reaching 50%. Considering that these data suggest a pregnancy chance equal to a coin flip, they add to doubts recently voiced in the literature about clinical purpose and cost-effectiveness of PGS. Moreover, embryo mosaicism at preimplantation stages may be physiologic.

ARE SCREENING AND DIAGNOSIS OF GESTATIONAL DIABETES MELLITUS BY IADPSG CRITERIA EFFECTIVE? NO, SCREENING AND DIAGNOSIS BY IADPSG CRITERIA IS NOT EFFECTIVE

Christian Göbl, Austria

In the past decades, diagnosis criteria for gestational diabetes mellitus (GDM) were repeatedly discussed and revised. In accordance with the IADPSG (International Association of Diabetes in Pregnancy Study Groups), hyperglycaemia in pregnancy is diagnosed if plasma glucose concentrations exceed one out of three thresholds during a 75g oral glucose tolerance test (OGTT): fasting ≥92 mg/dl (5.1 mmol/l); 1 hour after oral glucose load ≥180 mg/dl (10.0 mmol/l) and 2h after oral glucose load ≥153 mg/dl (8.5 mmol/l). Therefore, general OGTT screening is recommended between 24 and 28 weeks of gestation in all pregnant women. These recommendations for GDM screening and diagnosis were more recently adopted by the WHO and several national health care authorities. However, there are some major concerns: First; a single step screening reliant on one abnormal glucose value will significantly increase the number of pregnant women diagnosed with very mild forms of hyperglycaemia (about 18% in the entire HAPO cohort). Second; the OGTT is poorly reproducible. Third; there is actually no evidence of proven benefit of these recommendations. As another point of concern, most cases of macrosomia in the HAPO study occurred at glucose levels below the IADPSG thresholds and maternal overweight or obesity might be an even more important predictor. While the effectiveness of general OGTT screening as recommended by the IADPSG needs to be further evaluated in prospective studies, emerging technologies including continuous subcutaneous glucose monitoring as well as advanced mathematical models combining the information of postprandial glucose and insulin dynamics in addition to novel biomarkers could potentially provide more detailed insight into the underlying pathophysiological processes to further improve GDM classification. Also issues on cost-effectiveness need to be addressed: General screening requires higher costs due to time expenditure and analyses of multiple blood samples. It is therefore an ongoing matter of debate how to reduce the number of invasive and expensive examinations in the clinical setting of pregnancy care. This is of particular importance for countries with less developed health care systems. An alternative to general screening as recommended by IADPSG is to do selective screening by use of clinical prediction models, including statistical combinations of several risk indicators to decide if it is necessary to proceed with further diagnostic tests. These might also include fasting plasma glucose, HbA1c or other biomarkers to reduce the number of more invasive examinations. Such models were shown to have excellent predictive performance in previous studies. General screening and diagnosis as recommended by IADPSG has possible advantages but also some major limitations. Therefore, alternative

approaches need to be further developed to provide even more effective strategies for risk stratification.

FETAL PROGRAMMING IN PERINATOLOGY, PREVENTING ADULT ILLNESS

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During pregnancy, which is also commonly known as 'another state', it is possible to discover and prevent health problems in women but also in newborn population. We are going to analyze early discovery of the disease, as well as morbidity decrease, through easier diagnosis in all specialties as well as careful, precise and good knowledge of perinatology. As perinatologists, we also have the power, the chance, as well as obligation not to let the capacity of newborn genetic basis to be decreased. By influencing the circumstances of child development, we do not let the child potential to be limited or handicapped under the influence of potential pathogenetic changes. Up-to-date researchers have discovered the magical power of fetal programming. Concerning the fact of great potential for making diagnosis using genetic mapping, in nearby future the precise detection and ethiopatogenesis would be easily made. The perinatologists familiar with modern principles of pregnancy follow-up will timely recognize the eventuality for development of gestational diabetes, screen and diagnose the disease and thereby prevent onset or postpone the onset of the diabetes mellitus type 2, which can decrease complications and improve future quality of life. This can be achieved by timely introduction of anti-diabetic nutrition or the administration of insulin in pregnancy. This would enable the mother's pancreas after delivery to recover with less stress during puerperium and to have its function at the satisfactory level without the medication support. What genetics and conditions of fetal environment dictate will manifest through clinical, laboratory and ultrasound changes which we establish in perinatology. But also, if not detected, it would be manifested later with pathological conditions in newborns and their later life. Thus, Aristotle's dilemma – which is older: chicken or egg – returns to its interesting but solvable circle. The following diagnoses could be established: ● Fetal macrosomia or even LGA (large for gestational age) by excluding genetic factors and establishing gestational diabetes; ● Intrauterine fetal growth retardation by excluding genetic predisposition and chromosomopathies, as well as uteroplacental, placental, foetoplacental and even intra-fetal vasculopathies; ● Hypoxia, limitation in blood quality, especially in oxygen concentration which is supplied to the fetus by blood, with or without the change in fetal body weight; ● Decrease in amniotic fluid as a consequence of limited fetal renal function, in terms of decreased renal perfusion as a consequence of hypoxia. The evidence on connection of fetal growth and chronic diseases during life are accumulating rapidly. This knowledge could have important implications in the prevention of chronic diseases related to nutrition, especially in the population with high incidence of low body weight which depicts poor maternal nutritive status. The current evidence on connection between fetal nutrition and risk of cerebrovascular disease during life, based on epidemiological and experimental data, could enable appropriate health care policy and strategy, which is of great importance especially for developing countries. The connection between fetal growth retardation and cardiovascular risk is emphasized before the fetal growth determinants themselves. It is evident that smoking in pregnancy is recognized as risk factor for decreased fetal growth and low birthweight. **Fetal adaptive mechanisms:** Pathophysiological fetal mechanisms: 1) Fetal glucocorticoids and resetting of hypothalamus-pituitary-adrenal axis; 2) Resetting of the insulin similar growth factor system. **Morbidity prevention in a new person via fetus:** Through well-established connection between the mother, fetus, placenta and neonate, we are able to prevent morbidities in a newborn person via fetus: ● hypertension; ● obesity; ● metabolic syndrome; ● diabetes; ● autism; ● polycystic ovaries and hirsutism; ● asthma; ● intellectual capabilities preservation; ● hearing damage prevention. **Neonate, a new human predisposed to disease:** In the study on babies born at term, fetal maturation was present in 84% of the cases of newborns born with SGA. Fetal malnutrition could be a result of inadequate maternal nutrition, maternal disease or more frequently abnormal utero-placental blood supply and placental function. The changes in fetal growth result from adaptations which determine the vulnerability to cardiovascular, metabolic and endocrine diseases during life. The 'programming' is a phenomenon with long-term and irreversible changes in structure and function of metabolism induced by short stimuli. During fetal development, the changes in nutrients and hormonal setting of the conceptus in the critical period could change the expression of the fetal genome which leads to permanent effects to the group of physiological functions and structures. The important point in this definition is that reprogramming may occur only during a certain period when a person is sensitive. Programming reflects the general principle of development biology while the large number of systems and organs may be determined by intrauterine development.

Besides direct damage, there are two ways how stimuli and damages in early critical period may leave *long-term consequences:*

1. *Induction, deletion or decreased development of certain somatic structures*
2. *Physiological events, such as hormonal axis resetting, with long-term consequences to function*

MICRORNA MIR-200B AFFECTS PROLIFERATION, INVASIVENESS AND STEMNESS OF ENDOMETRIOTIC CELLS BY TARGETING ZEB1, ZEB2 AND KLF4

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Endometriosis is characterized by growth of endometrial tissue at ectopic locations. Down-regulation of microRNA miR-200b is observed in endometriosis and malignant disease, driving tumour cells towards an invasive state by enhancing epithelial-tomesenchymal transition (EMT). miR-200b up-regulation may inhibit EMT and invasive growth in endometriosis. To study its functional impact on the immortalized endometriotic cell line 12Z, the stromal cell line ST-T1b, and primary endometriotic stroma cells, a transient transfection approach with microRNA precursors was employed. Expression of bioinformatically predicted targets of miR-200b was analysed by qPCR. The cellular phenotype was monitored by Matrigel invasion assays, digital-holographic video microscopy and flow cytometry. qPCR revealed significant down-regulation of *ZEB1* ($P < 0.05$) and *ZEB2* ($P < 0.01$) and an increase in E-cadherin ($P < 0.01$). miR-200b overexpression decreased invasiveness ($P < 0.0001$) and cell motility ($P < 0.05$). In contrast, cell proliferation ($P < 0.0001$) and the stemness-associated side population phenotype ($P < 0.01$) were enhanced following miR-200b transfection. These properties were possibly due to up-regulation of the pluripotency-associated transcription factor *KLF4* ($P < 0.05$) and require attention when considering therapeutic strategies. In conclusion, up-regulation of miR-200b reverts EMT, emerging as a potential therapeutic approach to inhibit endometriotic cell motility and invasiveness. Note: This work is presented as the Robert-G. Edwards Paper Prize Award contribution and has been previously published (Eggers J.C. et al. Reproductive BioMedicine Online (2016) 32, 434–445)

ENDOMETRIAL RECEPTIVITY: HOW TO ASSESS IT AND IS IT KEY TO EMBRYO WASTAGE?

Georg Griesinger, Germany

Measuring endometrial thickness (EMT) and endometrial pattern is a routine part of IVF monitoring. A large number of studies have established an association of EMT with pregnancy likelihood, however, the majority of studies failed to test the impact of EMT among other important confounders. A large systematic review of 22 studies recently reported that, in uni-variate analysis, a thin endometrium on day of triggering final oocyte maturation is related to a lower chance of pregnancy: the clinical pregnancy rate for an EMT≤7mm was significantly lower compared with cases with EMT>7 mm [23.3% versus 48.1%, OR 0.42 (95% CI 0.27 –0.67)] (Kasius *et al*., Hum Reprod Update 2014). However, it is unclear whether the endometrial thickness is more an epiphenomenon of potentially multiple predictive factors for IVF success such as ovarian response, age and patient history, rather than an independent contributor to the chance of achieving a pregnancy. Accordingly, the authors of the systematic review (Kasius et al., Hum Reprod 2014) called for "further research to investigate the real independent significance of EMT in IVF". A recent retrospective analysis of a large number of IVF cycles, utilizing a stepwise regression analysis to adjust for potential confounders, arrived at the following estimate of the association of EMT (per mm increase) and live birth likelihood: OR=1.078; p<0.001 after controlling for female age, the only significant predictor (Yuan et al., RBMonline 2016). Similar findings have been reported from a combined analysis of phase III trial data on luteal phase support with s.c. progesterone or vaginal progesterone when the EMT is measured on day of embryo transfer (Griesinger et al., ESHRE abstract 2016). In conclusion, the EMT is only a weak independent predictor of pregnancy likelihood and interventions to correct thin EMT have only a weak evidence basis and should be abandoned until contrary evidence arises. The independent contribution of the endometrial pattern or subendometrial blood flow (assessed by Doppler) has not been studied in larger sized trials. Likewise has the diagnostic test performance of gene expression arrays assessing endometrial receptivity not been elucidated and recommendations for clinical

management cannot currently not be systematically derived from such tests.

HEREDITARY BREAST CANCER

Daphne Gschwantler-Kaulich, Austria

Breast cancer is the most common malignancy in women with a life-time risk of 12.5% in western countries. About 90% of breast cancer cases are sporadic and only 5-10% are counted among genetic breast cancer. BRCA1 and BRCA2 mutations are responsible for about 5-7% of breast cancer cases. I will discuss current knowledge of BRCA1/2 mutations, their clinical consequences regarding early detection programs as well as prophylactic surgery and the development of multigene panels and their role in the future.

ARTIFICIAL GAMETES: READY FOR CLINICAL USE?

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Worldwide, infertility is a clinical condition that concerns 15% of couples in reproductive age. In 28% of the cases, different pathologies cause the absence of available functional gametes such as patients with premature ovarian failure, post-menopausal women, women undergoing cancer treatment and male patients suffering from non-obstructive azoospermia, male undergoing cancer treatment in their early infancies or other pathologies. When functional oocytes or sperm are absent, no treatment is available other than the use of donor gametes, without the chance for their own genetic child. For these couples, *de novo* generation of gametes from their own stem cells would overcome the need of donor gametes. To accomplish this, patient-specific pluripotent stem cells need to be produced by reprogramming somatic cells, and subsequently these stem cells should be directed to form functional gametes, preferentially all *in vitro*. Currently, this process is referred to as In Vitro Gametogenesis (IVG). Major breakthroughs have recently been obtained in this IVG process, bringing the application of artificial gametes closer and closer to the clinic. Reprogramming somatic cells is nowadays possible in human by either somatic cell nuclear transfer technology (SCNT) or direct reprogramming of somatic cells by the formation of induced pluripotent stem cells (iPSC). Much research is currently going on to compare which reprogramming strategy is more efficient. Of course, the iPSC strategy is more straightforward and less ethically debated, since it does not require the need for oocytes or embryo formation as is the case with SCNT. It will be important to verify which reprogrammed stem cells are the most suitable for IVG. The next and most difficult step is to differentiate these reprogrammed stem cells, either SCNT-human embryonic stem cells or iPSC towards functional gametes. Most of the knowledge accumulated in the development of mammalian gametogenesis comes from animal models, mainly the murine model, while the process is still poorly understood in humans. Gametes are highly specialized and unique cells responsible for transmitting genetic and epigenetic information over generations. In mouse, both functional oocytes and sperm have been established from pluripotent stem cells, initially involving an in vivo step. After mouse pluripotent stem cells differentiated towards primordial germ like cells, the latter were transplanted into an in vivo niche for final maturation until the oocyte or sperm. Recent breakthroughs however have shown that the entire process of gametogenesis from pluripotent stem cells can be established completely in vitro in the mouse. The keys to success were (i) the type of pluripotency state of the starting stem cell population being the naive state, (ii) the in vitro co-culture with a suitable somatic niche and (iii) the stepwise use of appropriate culture conditions. Efficiency of the IVG process is still low, compared to the in vivo production. How to extrapolate this process to human is still in its infancy, as it has been shown that gametogenesis is species-specific, and although the general process is conserved amongst mammals, there are some significant differences that hampers the direct translation of the knowledge acquired in animal models, especially mouse into human.

WHAT EVIDENCE IS THERE FOR TESTING FOR GESTATIONAL DIABETES IN EARLY PREGNANCY?

Evelyn Huhn, Switzerland

Universal screening at the end of the second or early third trimester detects pregnant women with gestational diabetes mellitus (GDM). Treatment of GDM decreases associated morbidities like rate of preeclampsia, caesarean section, large for gestational age infants and shoulder dystocia. Hypothetically, early first trimester screening would allow to start the beneficial intervention as early as possible. The presentation wants to give an overview of published data about first trimester screening strategies and the existing evidence of early treatment. Large randomised controlled intervention trials and cost effectiveness analyses of the different GDM screening strategies are much needed.

MIDWIFE DELIVERIES IN A UNIVERSITY CLINIC SETTING

Peter Husslein, Austria

Midwife-led delivery care has been shown to be effective if the group of pregnant women is chosen adequately. At the Department of Obstetrics and Gynecology of the Vienna University we have implemented such a midwife delivery care model for about 20 years. In a retrospective study of 2123 deliveries the following results were obtained: 148 (7%) had to be transferred to doctor-led delivery care; of these 10 cesarean sections (0,5 % of the total number of originally midwife-led deliveries) and 24 vacuum deliveries (1,1 % of the total collective) were performed. Less oxytocin, less pain medication, a lower incidence of artificial rupture of membranes and fewer episiotomies were performed in the midwife-led delivery group when compared to an appropriately selected group of deliveries made by doctors.
In summary, the results of this retrospective study show that midwifes can safely deliver pregnant women in a well selected group of low risk pregnancies. Based on these stimulating results we have enlarged our care model to include pregnancy care: Pregnant women who wish to be followed by midwifes only can book in our department after pregnancy week 25 and can be delivered by midwifes only with the possibility to be transferred to doctor's care in the same delivery floor with a cesarean section operating theater included in the delivery unit and the neonatology intensive care department directly adjacent. Midwife-led pregnancy and delivery care is an interesting offer to pregnant women but should be implemented within the infrastructure of a high-risk delivery floor to be able to take care of an emergency at all times.

TESTS FOR HPV SCREENING: CLINICAL VALIDATION

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More than 200 commercial test methods for the detection of Human papilloma virus (HPV) in cervical swab samples are currently available. These tests differ in their test principles, the target molecule (DNA or RNA), as well as the targeted viral genome region. Only eight high-risk HPV testing methods meet the criteria required by Meijer et al and only four of these tests have received FDA approval for the US market. In order to be applied in organized population-based screening settings, a new HPV test should fulfil a standardized set of requirements. First, the test should only detect those 13 HPV types previously classified by the IARC/WHO as carcinogenic class I/IIA to humans. The clinical sensitivity and specificity of an HPV test for the detection of CIN2+ must not be lower than 95% and 98% of already established HPV test systems that have also been studied in randomised controlled trials, such as the HC2 (QIAGEN) test with the endpoint of cervical cancer. Furthermore, the test-positivity rate in women with NILM should not be higher than that of the HC2 test (kappa value >0.7). Intra- and inter-laboratory reproducibility on different instruments and with different staff should be at least 90%. And because all HPV screening programs comprise screening intervals of at least 3-5 years, the longitudinal cumulative incidence rate of CIN2+ and the NPV should not be significantly different from the HC2 test. In addition, the desired test should have demonstrated convincing performances in pilot trials, should be accepted by the lab and the referring ObGyn and should be cost-effective. In order to substantiate clinical evidence for HPV test usage in routine screening settings, we have performed three HPV DNA and RNA test comparisons (Abbott: Realtime high risk HPV test, Hologic: CERVISTA, APTIMA) in cross-sectional studies (N= approx. 10,000 each) based on routine screening populations and currently perform an RNA test comparison (APTIMA; N=9451) in a 6-year prospective routine screening cohort. All evaluated test methods showed a high degree of automatization, inter- and intra-laboratory reproducibility and non-inferiority in their clinical performance as compared to the gold standard test (HC2). However, the CERVISTA method revealed a twice as high positivity rate in women with normal cytology than the HC2 test leading to an increased twice as high referral rate in our comparative cross-sectional study. The Abbott HPV test on the other hand missed two cases of HPV31-positive CIN3. In contrast, the APTIMA RNA-based test consistently shows a comparable clinical sensitivity to HC2 in combination with a higher clinical specificity. This

leads to a 23% reduction of the number of follow up procedures while at the same time keeping a high sensitivity for the detection of CIN2+. In summary, HPV tests greatly improve cervical cancer screening programs, but prior to their introduction into nationwide screening programs, HPV tests need to be validated best in pilot studies under real-life screening conditions or at least fulfil the criteria as documented above.

VULVAR DERMATOSES: NATURAL HISTORY OF *LICHEN SCLEROSUS* AND *LICHEN PLANUS*; RISK FOR MALIGNANCY

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Lichen Sclerosus (LS) and *Lichen Planus (LP)* are dermatosis which can affect also genital mucosa. Estimated prevalence for LS is 0.1–0.3% in a general hospital patient population and 1.7% in general gynecological practice. Respectively, LP prevalence among vulva clinic patients is estimated to be around 3.7%. Malignancy potential of both dermatoses have been suspected, but evidence is sparse. There is an association with vulvar LS and subsequent vulvar squamous cell carcinoma (SCC); the estimated risk of developing vulvar SCC in the areas affected by LS is up to 5%. In contrast, extragenital LS does not seem to be associated with malignant transformation. There is an association between oral LP and oral squamous cell carcinoma (SCC). Also, some case reports of patients with LP and subsequent vulvar SCC exist. We used the population-based Finnish Cancer Registry data to further study this. We identified all women with the diagnosis of LS (n= 57,616), or LP (n=513,100) recorded in the Finnish Hospital Discharge Registry from 1970 or 1969 to 2012. The cohort was followed through the Finnish Cancer Registry for subsequent cancer diagnoses until 2014. Standardized incidence ratios (SIRs) were calculated for different cancers by dividing the observed numbers of cancers by expected ones. The expected numbers were based on national cancer incidence rates. During the follow-up period, we found 812 cancers among patients with LS (SIR: 1.13, 95% CI 1.05–1.21) and 1,520 with LP (SIR 1.15, 95% CI 1.09–1.20). LS was associated with an increased risk of vulvar (182 cases, SIR: 33.6, 95% CI 28.9–38.6) and vaginal cancer (4 cases, SIR: 3.69, 95% CI 1.01–9.44). The risk of cancers of the uterine cervix and lung was significantly decreased. LP was associated with an increased risk of cancer of lip (SIR 5.17, 95% CI 3.06–8.16), cancer of tongue (SIR 12.4, 95% CI 9.45–16.0), cancer of oral cavity (SIR 7.97, 95% CI 6.79– 9.24), cancer of esophagus (SIR 1.95, 95% CI 1.17–3.04), cancer of larynx (SIR of 3.47, 95% CI 1.13–8.10) and cancer of vulva. Patients with diagnosed LS is associated with an increased risk for vulvar and vaginal cancer. Respectively, patients with LP have an increased risk of developing cancer of lip, tongue, oral cavity, esophagus, larynx and vulva. These data are important when considering treatment and follow-up of patients with a diagnosis of these dermatoses.

CANCER IN PREGNANCY: NEED FOR CENTRALIZATION

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Problem Statement: The incidence of malignancies coinciding with gestation is increasing. Cancer is the second most common cause of death during reproductive years and therefore presents a major public health issue. Diagnosis of cancer in pregnancy is challenging, because of difficult differentiation between symptoms of cancer and normal pregnancy. Moreover, the management of cancer during pregnancy also presents a challenge. Patient's desire for its preservation complicates treatment choices. Decision about the best management should balance maternal and fetal interest. Women should be optimally managed by a multidisciplinary team. **Methods:** This multi-centric prospective study was undertaken at the Clinic for Obstetrics and Gynecology and Clinic for Hematology, Clinical Centre of Serbia from 2005 until 2013. All pregnant women who were diagnosed with malignant tumor during pregnancy were consecutively included in the study throughout a period of 9 years. Diagnosis of malignancy was based on pathology reports of tumor biopsies. Patients were followed-up for one year after delivery. The pregnancy course and outcome were evaluated. Furthermore, we investigated parameters that could influence the condition of mother and child. Obtained data were statistically analyzed using standard methods of descriptive and analytical statistics. **Results:** Study involved 32 patients aged in average 34 years. The majority of malignancies were hematologic. Most malignancies were diagnosed in the second trimester and treated with combined therapy after pregnancy. Majority of children were in good state throughout pregnancy, but were delivered by Caesarean Section before term. All children of mothers who died during pregnancy did not survive. There were no adverse consequences of surgery during pregnancy, but chemo or radiotherapy deteriorated children conditions during pregnancy. The majority of both mothers (p=0.035) and children (p=0.013) were in good state 12 months after delivery, but numerous mothers were still ill and on therapy. Mother's condition after delivery is the best predictor (71.8%) of her survival. **Conclusions.** Parameters that influenced the most the condition of the child during pregnancy were tumor origin, presence of malformations, delivery type and time. The condition of the child one year after delivery depends on therapy type, mother's outcome, gestational week and birth weight. Surviving the pregnancy and the localization of malignancy proved to have the biggest impact on the condition of the mother 12 months after pregnancy. In order to obtain the best possible outcome for both mother and child they should be monitored with the standard prenatal care established for high-risk pregnancies. The optimal therapeutic strategy should be chosen by the medical team, patient and her family depending on gestational age, nature and stage of cancer, treatment options and patient wishes.

THE PROMISES OF THE SECOND-GENERATION HPV VACCINES

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HPV vaccines became available Europe in 2006. They were considered to be cervical cancer vaccines for adolescent females. The first generation included a quadrivalent HPV 6/11/16/18 vaccine and a bivalent HPV 16/18 vaccine, protecting against infections and disease caused by the most oncogenic HPV types 16/18, the quadrivalent vaccine also against genital warts and lesions related to HPV 6 and 11. Today we know that the vaccines can protect against a variety of genital cancers in both females and males (cervical, vaginal, vulvar, anal, penile). A gender-neutral approach at an early age is most effective, the HPV vaccines have become pediatric vaccines, best applied at the age of nine. The early age of vaccination enables a reduced schedule of 2 doses with an interval of 6-12 months, which is recommended by WHO up to the age of 15. At this age, the immune response is superior and the likelihood of previous infections low. Some results are also available for vaccine efficacy with one dose. After some promising results for cross-protection against types not included in the vaccines (i.e. HPV 31/33/45), long term follow-up studies and real-life data suggest that the effect of cross protection is not long lasting and confounded by co-infections. Since 2016 a ninevalent HPV 6/11/16/18/31/33/45/52/58 vaccine is available, giving a robust protection (Vaccine efficacy 97%) against these types. The ninevalent HPV vaccine hast been highly immunogenic in females and males from the age of 9, up to the age of 26, a study evaluating the immunogenicity in females up to the age of 45 is ongoing. The efficacy against disease related to HPV 6/11/16/18 was the same, a follow- up of the clinical trials up to six years is available. Since we have seen very impressive effects with the first generation in a real-life situation, reducing infections and disease related to the HPV vaccine types, we could expect almost an elimination of HPV related disease in long term with the second generation. A reduction of genital warts and precancer has been demonstrated yet, in Australia with an excellent coverage (now up to the age of 35) a reduction of invasive cervical cancer should be visible soon. In Europe, all HPV vaccines are now licensed for both genders from the age of 9 without an upper age limit. The future in will be a gender-neutral vaccination with 2 doses at an early age with a polyvalent HPV vaccine. In combination with the vaccination of adults and new algorithms for cervical cancer screening utilizing HPV testing, elimination of HPV related disease would be possible.

GESTATIONAL TROPHOBLASTIC DISEASE: OUR EXPERIENCE

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Gestational Trophoblastic Diseases (GTD), a group of specific gynecological neoplastic diseases, include complete and partial hydatidiform mole (pre-malignant lesions), invasive mole, choriocarcinoma, placental-site trophoblastic tumor (PSTT) and epithelioid trophoblastic tumor (ETT) (malignant diseases – Gestational Throphoblastic Neoplasm's-GTN). Invasiveness, good vascularisation, metastasis-forming ability, relapsing and chemo-sensitivity are basic features of all GTDs. Being rare diseases, they require special attention, individual approach and centralized diagnostic and therapy. These conditions have unfavorable prognosis if not treated. Hydatidiform mole is usually treated with evacuation of the pathological pregnancy (dilation and suction curettage). Hysterectomy is reserved for selected cases of life-threatening hemorrhage or in patients who concluded their reproduction. After the evacuation of molar pregnancy careful follow-up is required in order to detect persistent disease or malignant alteration when chemotherapy is indicated. Follow-up is based on serum and/or urine beta-hCG analysis in strict timely manner. Treatment of GTN depends on age and reproductive status of patient and consists of chemotherapy or hysterectomy (not necessarily, fertility sparing

treatment is very likely in most of the cases). Once the chemotherapy is indicated (regardless of type of GTD), risk for development of resistance to single agent chemotherapy must be assessed with WHO Prognostic Scoring System, regardless of the FIGO stadia (WHO Prognostic Scoring System is not applicable to PSTT and ETT). If the disease is scored as low-risk, single agent chemotherapy can be used; otherwise combined chemotherapy is required. At the Clinic for Gynecology and Obstetrics, Clinical Center of Serbia (CGO CCS) during the past 4 years 12 patients were successfully treated with dilation and suction curettage (D&C) only due to partial hydatidiform mole. In the same period, there were 6 cases of invasive hydatidiform mole of which 4 patients were treated with D&C following 3-7 cycles of single agent chemotherapy with Methotrexate, one with D&C following 4 cycle of combined chemotherapy (EMA-CO regime) and one with D&C and hysterectomy (on patients demand). All patients achieved complete remission (clinically and by the level of beta-hCG) and have been regularly and thoroughly followed-up to date. We have treated 6 patients suffering from choriocarcinoma during the last 4 years, 4 with combined chemotherapy (4-8 cycles according to EMA-CO regime) and 2 with combined chemotherapy only (10-11 cycles according to EMA-CO protocol). All patients achieved complete remission (clinically and by the level of beta-hCG) and have been regularly and thoroughly followed-up to date. During the same period there were 3 cases of PSTT, all of them underwent hysterectomy and 2 of them received combined chemotherapy following the EMA-EP protocol, all patients achieved complete remission, one patient died from other cause three and a half years after the diagnosis. Gestational Trophoblastic Diseases are specific, rare and challenging group of gynecological malignancies with bad prognosis if not treated, but with excellent outcomes with proper treatment and follow-up which allows fertility preservation.

MATERNAL HEMODYNAMICS IN HIGH RISK PATIENTS

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Women undergo a variety of physiological cardiovascular adaptations in normal pregnancy, in order to support the development of the fetoplacental unit. Marked changes from the non-pregnant state can be seen from as early as 6 weeks of gestation. Women who develop pathological pregnancies, such as preeclampsia (PE), fetal growth restriction (FGR), preterm birth and diabetes have increased arterial stiffness, in the form of elevated pulse wave velocity (PWV), augmentation index (Aix) and central blood pressure. Some of these changes can be detected as early as 11 weeks' gestation, and some persist in the postpartum period. These women also have increased cardiovascular morbidity and mortality later in life. In fact, they might have cardiovascular predisposition, even before the complicated pregnancy. The lack of the improved arterial compliance, which occurs in normal pregnancy, seems to play a critical role in the changes observed in these pathological pregnancies. Therefore, evaluating arterial function may play an important role, not only in identifying women at higher risk of developing complications during pregnancy, but also those at highest risk of cardiovascular disorders later in life. All parameters of arterial stiffness in women with PE have been shown to differ significantly from normal pregnancies. A relationship between PWV and birthweight in normal pregnancies was found, with an increase of 1 m/sec in PWV associated with a decrease in birthweight centiles by 17.6%. In pregnant women with chronic hypertension who subsequently develop both superimposed PE and FGR AIx-75 was a determinant of birthweight, and was the only significantly elevated hemodynamic parameter in patients who developed FGR but not superimposed PE. Arterial stiffness indices are higher in women with established gestational diabetes and in those with pre-existing type 2, but not type 1, diabetes mellitus. Furthermore, women who develop gestational diabetes have increased arterial stiffness, which are evident from the first trimester of pregnancy, suggesting its potential predictive value.

PREGNANCY OUTCOME IN WOMEN WITH ADENOMYOSIS

Esra Kılıçdağ, Turkey

Adenomyosis is related to pelvic endometriosis and frequently occurs among patients in their 30s and 40s. The number of pregnancies complicated by adenomyosis has increased in recent years along with the trends in delayed pregnancy and advances infertility treatment
Assisted reproductive technology outcome is the best approach to evaluate the effect of adenomyosis on pregnancy. Results of studies evaluating the effects of adenomyosis on the outcome of in vitro fertilization (IVF) treatment show that adenomyosis has a detrimental effect on IVF clinical outcomes. Live birth among women with adenomyosis is significantly lower than in those without adenomyosis. The miscarriage rate in women with adenomyosis is higher than in those without adenomyosis. Oocytes donation is an appropriate model for evaluating the effect of adenomyosis on pregnancy because the quality of the replaced embryos is quite similar because of the age of the donors, and the endocrine environment of the endometrium is standardized by exogenous steroid replacement. Women with adenomyosis alone showed a significantly higher rate of miscarriage than those with endometriosis (6.1%) and controls (7.2%). As a result, term pregnancy rate was significantly lower in the adenomyosis group (26.8%) than in the endometriosis (38.0%) and control (37.1%) groups in patients undergoing oocyte donation (Conejero JM, 2011). In summary, an increasing amount of data indicates decreased implantation and increased early abortions in the presence of adenomyosis. But the rate of successful pregnancies may be related to the extent of adenomyosis. A limited number of studies have reported on pregnancies complicated by adenomyosis and the associations between adenomyosis and perinatal outcomes have not been thoroughly investigated. There are only three case-control studies about relationship between adenomyosis and pregnancy or neonatal outcomes. First case–control study (Juang CM, 2006) suggested an increased risk of preterm delivery for patients with adenomyosis. Gravid women with adenomyosis experienced a 1.83-fold increased risk of preterm delivery overall, as compared with gravid women without adenomyosis. After adjusted for covariates, gravid women with adenomyosis were associated with significantly increased risk of spontaneous preterm delivery (adjusted OR = 1.84) and PPROM (adjusted OR = 1.98). Another study, a retrospective case–control study (machimaro A, 2015), indicated that there was an increased risk of preterm delivery, fetal growth restriction, and fetal malpresentation in patients with adenomyosis. A recent study (retrospective case–control study, hashimato A 2017) including forty-nine singleton pregnancy cases complicated with adenomyosis and 245 controls. They have demonstrated that significantly higher incidence of spontaneous second trimester miscarriage in the adenomyosis group (12.2%) than in the control group (1.2%) (OR: 11.2, 95% CI: 2.2–71.2). The incidence of Hypertansif disorder of pregnancy was also significantly higher in the adenomyosis group (30.6%) compared with the control group (6.1%) (OR: 6.7, 95% CI: 2.7–18.2). Preeclampsia was significantly more common in the adenomyosis group (18.3%) than in the control group (1.2%) Moreover, the incidence of placental malposition, including placenta previa and low-lying placenta requiring cesarean delivery, was significantly higher in the adenomyosis group (14.2%) than in the control group (3.2%) (OR: 4.9, 95% CI: 1.4–16.3). Preterm delivery was also found to be significantly more common in the adenomyosis group (24.4%) than in the control group (9.3%) (OR: 3.1, 95% CI: 1.2–7.2). Cesarean delivery was significantly more common in the adenomyosis group (65.1%), compared with the control group (31.4%) (OR: 4.0, 95% CI: 1.9–8.6). The most common indication for cesarean delivery in the adenomyosis group were non-reassuring fetal status (NRFS) (32.1%), which was significantly more common than in the control group (14.4%) (OR: 5.07, 95% CI: 1.73–14.2). The analysis of the neonatal outcomes revealed a significant difference in the median birth weight between the adenomyosis group (2716 g) and the control group (2972 g) ($p<0.001$). In addition, the birth of a SGA infant was significantly more likely in the adenomyosis group (20.9%) than in the control group (7.0%) (OR: 3.5, 95% CI: 1.2–9.0). When we investigate the reason of major obstetrical complication, we see implantation period as a key factor. From the onset of pregnancy, the uterine JZ plays a critical role in deep placentation, characterized by the transformation of the endometrial and myometrial segments of the spiral arteries that ensures adequate blood supply to the growing fetus. Defective deep placentation is the hallmark of various pregnancy complications, including second trimester miscarriage, placental abruption, pre-term birth, FGR and pre-eclampsia. Thickening and disruption of junctional zone appearance is strongly associated with adenomyosis. Adenomyosis represents a spectrum of lesions ranging from disruption of the junctional zone architecture with little or no endometrial invasion to overt diffuse adenomyosis and focal adenomyoma. Therefore, it is not surprising that these complications are seen with increasing frequency in adenomyosis. **What can we do?** Although evidence seemed to show that adenomyosis might be associated with negative impact on fertility, management of these patients is highly controversial: Firstly; we don't know who will benefit from medical treatment alone, such as ART, and who will benefit from surgery. Secondly; we don't know whether there will be an improvement in reproductive performance after the use of medical and/or surgical management. **Can we improve obstetrical outcome with surgery?** In a detailed review from Grimbisis GF 2014, pregnancy rates appear to be higher than 50% after localized adenomyosis surgery in younger women. This rate was higher than that presented by Dueholm M 2017. Because last review included two recent additional studies inçlude women with extensive adenomyosis and older women. Saremi AT 2014 showed 23% live birth rate in women with extensive adenomyosis, and Kishi Y 2014 concluded that cytoreductive surgery had no impact on fertility outcome in women over the age of 40. Clinical pregnancy rate was %41,3 in younger than 40 years old but only %3.7 in patients older than 39 years old. **How can we analyze the determining factors of successful pregnancy after surgery?**

Advanced age, posterior wall involvement of adenomyosis, the severity of endometriosis and extent of adenomyosis, and adenomyosis at both anterior and posterior wall are negative factors relating to clinical pregnancy. We should discuss the perinatal complication of the surgery. Kishi Y reported two cases of placenta accreta, and both of them resulted from extremely severe adenomyosis affecting a broad range of the uterine subendometrial myometrium. For uterine rupture after adenomyomectomy, only 22 pregnancies and four ruptured cases have been reported to date. In three of these three ruptured cases, an adenomyomectomy was performed by a laparoscopic operation; one patient was twin pregnancy by IVF-ET 12 months after the operation and ruptured at 30 weeks of gestation, and the other patient became pregnant only one month after the adenomyomectomy and ruptured at 28 weeks of gestation. And the third patient was by IVF 5 months after the operation and ruptured at 33 weeks. Therefore, a multiple pregnancy and a short interpregnancy interval seem to be risk factors for uterine rupture after adenomyomectomy. There are no systematic data concerning pregnancies after adenomyomectomy, such as a prior cesarean section or myomectomy.
Adenomyosis and delivery. Although most of the reported deliveries have been completed by cesarean delivery, there have been a few reports vaginal deliveries being allowed. Sporadic reports have outlined the risk of severe atonic postpartum hemorrhage in women with known adenomyosis, which can necessitate a peripartum hysterectomy. Because of the absence of data and experience, an elective caesarian delivery after adenomyomectomy seem preferable for patient safety, especially in nonorganized centers. We do not consider that all cases have the same risk of perinatal complications. Mild forms of adenomyosis have limited impact while more severely affected women have poorer outcomes. For surgery, more complete removal of the adenomyotic nodule may ensure stronger wound healing on defected uterine myometrium. Especially in far advanced cases, it is quite difficult to balance between complete removal of adenomyosis and preservation of healthy uterine muscles. Some studies have shown that long-term gonadotropin-releasing hormone (GnRH) agonist administration before frozen embryo transfer significantly improved pregnancy outcomes in patients with adenomyosis. High intensity focused ultrasound is a new and promising treatment option for patients with adenomyosis, but its efficacy, safety, cost effectiveness and fertility outcome must be evaluated by randomized controlled trials. Preconception and prenatal counseling is important in adenomyosis patient. Pregnancy complicated with adenomyosis should be managed more intensively and carefully. For now, we are left with need to have a detailed discussion with our patients. They need to be informed that their chance of successfully conceiving is likely to be affected by scoring of adenomosis. Patients also need to be informed about the lack of proper evidence for surgical, medical, or radiologic treatment to improve obstetrical outcome. When surgical treatment is offered, we have to mention the risk of scarring, perioperative morbidity or mortality, and a delay in the start of fertility treatment. Such treatments can, however, still be offered upon proper counseling, especially to women with previous pregnancy loss or multiple fertility treatment failures.

CAN WE MAKE THE ENDOMETRIUM MORE RECEPTIVE?

Gab Kovacs, Australia

The last step in the IVF obstacle course, is implantation. The following factors need to be considered for successful implantation. **Timing:** The embryo has to be transferred during the "window of implantation" (WOI), when the endometrial phenotype is "receptive". **Hormones:** There is increasing evidence from observational studies and randomized controlled trials that in ovarian stimulated cycles the endometrium is poorly prepared, and it suggested by some, that all embryos should be frozen at the blastocyst change, with subsequent transfer in an unstimulated (natural or hormone replacement) cycle. **Genetics of Implantation:** The Endometrial Receptivity Analysis (ERA®) focuses on recognizing the endometrial receptivity transcriptome. Non-receptive endometrium is thought to be due to transcriptomic displacement of WOI. This is then used to develop a personalised progesterone administration regimen. **Uterine microbiome:** The microbiome of the endometrium can now be assessed by molecular techniques (polymerase PCR, microarrays and targeted and whole genome sequencing). It is proposed that presence of dysbiotic bacteria may be a cause of recurrent implantation failure (RIF). **Oestrogen and progesterone:**
It is hypothesized that a premature elevation of P4 levels prior to ovulation trigger, might alter endometrial-embryo synchrony by temporally advancing the endometrial receptivity window. **Endometrial "scratch":** There is some evidence that endometrial injury performed in the previous cycle is associated with improved clinical pregnancy rates and live birth rates in women with more than two previous embryo transfers. **Removing intrauterine pathology:** Women with RIF should have a hysteroscopy. There is evidence that removal of submucous fibroids, and maybe intramural fibroids and polyps will improve implantation rates. **Dummy ET:** Dummy ET minimizes the risk of a difficult transfer, increases pregnancy rate, and is a useful tool in IVF training programmes. **Rest after ET:** There is no evidence that this is beneficial. **Sex after ET:** There is growing evidence that sexual intercourse before or around the time of embryo transfer may have benefits for IVF/ET success. **NK Cells:** Uterine Natural Killer Cells (uNKC) are specialized lymphocytes that play a role in regulating the remodeling of uterine spiral arteries. However, assays to measure NK cells in the blood and the uterus in women are highly controversial. As the role of uNKC in RIF is unproven, any therapeutic approach is not logical. **Immunotherapy:** RIF may often be caused by systemic or local immune disturbances. Several trials with or without control groups have investigated whether intravenous immunoglobulin **(Ivlg)** improves outcome after IVF/ICSI in RIF patients reporting a subsequent birth rate ranging from 15% to 75%. However, only one trial was adequately randomized and the definition of RIF was generally unclear. **Prednisolone** has been tested in 13 randomized controlled trials among non-RIF patients undergoing IVF/ICSI. A meta-analysis found that it improved pregnancy rate after IVF but not ICSI. **Intralipid** has in two studies of women with "reproductive failure" been reported to be associated with subsequent birth rates similar to those after Ivlg. However, one small randomized controlled study conducted in IVF patients suggested no beneficial effect of intralipid. **Antocoaggulants:** Studies so far have failed to show that aspirin or heparin have benefits in cases of unexplained RM or the assisted reproduction field.

VACCINE CONFIDENCE AND HESITANCY: THE CASE IN DENMARK

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In October 2006, quadrivalent human papillomavirus (HPV) vaccination was licensed in Denmark. It was included in the free of charge childhood vaccination program in January 2009 covering 12-year old girls, and in catch-up programs for respectively girls 13-15 years ((initiated October 2008) and women up to age 27 years (initiated in August 2012). The Danish HPV vaccination is delivered through a clinic-based program by general practitioners. Initially, a high vaccination coverage (80-90%) was achieved in most birth cohorts covered by the vaccination program, and together with e.g. Australia, Denmark was one of the first countries to demonstrate a real-world impact and effectiveness of HPV vaccination in relation to the occurrence of genital warts, and also related to cervical intraepithelial lesions (CIN) – including the high-grade lesions (CIN2/3). Despite a strong vaccination recommendation from the Danish National Board of Health and other organizations such as the Danish Cancer Society, there has subsequently been a substantial decline in HPV-vaccine coverage in Denmark. This decline in coverage is linked to reports of a number of women suffering from adverse events that may or may not be related to vaccination. A number of initiatives have been launched and these will be described and discussed.

PREVENTION OF PERI-MENOPAUSAL OBESITY BY DIET AND LIFE-STYLE INTERVENTION

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The menopausal leads to multiple endocrine and metabolic alterations, part of which are attributed to the decline of ovarian estrogens. Ovarian senescence causes a redistribution of fat in the abdomen, resulting in central adiposity, which together with dyslipidemia promote insulin resistance. Aging per se decreases energy expenditure, due to sarcopenia and reduced physical activity. Midlife, therefore, is a period when women usually gain weight. Measures to prevent perimenopausal obesity include primarily the incorporation of physical activity in the daily routine. Women should exercise at least 30 minutes daily with moderate intensity, like walking, or at least 75 minutes per week with exercise of vigorous intensity, like running. Exercise decreases insulin resistance and increases muscle mass, augmenting thus the basal metabolic rate. The diet should consist of nutrients rich in fiber, such as fruits and vegetables and should be low in refined carbohydrates, saturated fats and salt. Frequent small meals, of low glycemic load prevent the postprandial increase in insulin and the resulting storage of meal glucose and fat in adipose tissue.

INFLUENCE OF HORMONAL CONTRACEPTION ON DEPRESSION

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Background: Five to ten percent of women of reproductive age are using antidepressant drugs (AD), and about one third are using hormonal contraception (HC). We aimed to assess the influence of different types of HC on the risk of becoming a user of AD or of getting a depression diagnosis.
Material and methods: In a prospective design, we followed 1.1 million women 15-34 years through the period 2000-2013. All included women were without previous mental disease, thrombosis or cancer and none had used AD in the preceding five years at entrance to the study. Exposure to AD, HC and depression diagnoses were retrieved from National Health Registries. Confounder control included age, length of education, calendar year, endometriosis, and PCOS. Pregnant women were temporarily excluded during pregnancy and six months after delivery. Poisson regression provided relative risks of being user of AD or getting a depression diagnosis among users of HC with never-users of HC as reference group. **Results:** Within 6.8 million observation years, 441,523 started use of HC, 135.750 became first users of AD and 14,691 were admitted to hospital with a depression discharge diagnosis. Users of combined oral contraceptives had a relative risk of becoming users of AD of 1.7 (1.66-1.71). This risk was higher among women 15-19 years; RR 2.2 (2.18-2.31) gradually declining with increasing age. No consistent difference in risk of AD use was found for oral contraceptives with different progestogens, but users of transdermal patch and of vaginal ring had higher risk of AD use and of depression diagnoses than users of combined oral contraceptives. Users of progestogen only-pills experienced relative risks in the same order as users of combined oral contraceptives, and users of levonorgestrel intrauterine system had a relative risk of AD use of 1.9 (1.8-2.0). **Conclusion:** One of the most frequent medical exposures among women of reproductive age has a substantial influence on the risk of becoming user of AD and of getting a depression diagnosis. This influence should be considered when HC are prescribed, and women should know this potential influence.

LUOHU PROCEDURE IN FEMALE GENITAL TRACT CONGENITAL MALFORMATION (THE EXPERIENCE BASED ON 1000+ VAGINOPLASTY)

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Female genital tract congenital malformations are of different types and protean clinical manifestations, series of Luohu Procedures could be applied to their surgical treatment. Luohu II procedure (laporoscopic peritoneal vaginoplasty) is an effective and simple surgical treatment for MRKH syndrome. Trachelectomy and uterus-neovagina anastomosis (Luohu Ⅲ procedure) is used to treated patients with type Ⅱ vaginal atresia (completed atresia), which can relieve symptoms and restore fertility. Laparoscopic vaginal section and vaginoplasty with hyphemia cyst wall and peritoneum (Luohu Ⅳ procedure) is used to treated patients with type Ⅰ vaginal atresia (partial atresia), which surgically restored a patent outflow tract and preserved fertility. Preoperative imaging examination was of great importance to classification of Female genital tract congenital malformations and the choice of treatment. Selecting the appropriate timing of operation in the treatment play a key role. Patients were instructed to dilate the neovagina each day for a period with vaginal mould. Medical intervention was used in patients with endometriosis. Its long-term outcome of treatment in vaginal atresia in pregnancy and labor need to be assessed in the further.

ARE SCREENING AND DIAGNOSIS OF GESTATIONAL DIABETES MELLITUS BY IADPSG CRITERIA EFFECTIVE? YES, SCREENING AND DIAGNOSIS BY IADPSG CRITERIA ARE EFFECTIVE

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For more than 50 years, there has been a leak of consensus about adequate diagnostic screening criteria for gestational diabetes mellitus (GDM). Several diagnostic criteria across the globe have complicated the development of mother and child health programs and the performing and interpretation of research in GDM. The HAPO (Hyperglycemia and Adverse Pregnancy Outcomes) study was intended to standardise the diagnostic criteria for GDM. A strong linear relationship between increased risk of primary and secondary adverse pregnancy outcomes and increased maternal glycemia was shown. In 2010, the International Association of Diabetes and Pregnancy Study Groups (IADPSG) published recommendations for new diagnostic criteria, based on the HAPO study outcomes. Advised was a generally screening with an one – step 75g OGTT in 24th – 28th week of gestation, the plasma glucose levels corresponding to an odds ratio of 1.75 times the mean for the adverse outcomes were fasting ≥ 5.1 mmol/l (92 mg/dl); 1 h ≥10 mmol/l (180 mg/dl); 2 h ≥ 8.5 mmol/l (153 mg/dl). The ADA accepted IADPSG criteria in 2011, the Endocrine Society and the WHO adopted them in 2013, FIGO in 2015. ACOG continued to recommend the two-step method. Unfortunately, now, 7 years after introduction of IADPSG criteria, an international discussion about the way and timing of screening and diagnosis of GDM is still ongoing. These are the major points of controversy, respectively the benefit of screening and diagnosis GDM by IADPSG criteria:

- The application of IADPSG criteria increased the prevalence of GDM. Studies demonstrate a 1.03 – 3.78-fold gain compared with baseline criteria. Even using consistent criteria over time has led to an increased prevalence of GDM worldwide, due to the epidemic problem of DM2 and obesity.
- Several Studies about the impact of one- step IADPSG criteria versus two-step method showed, that additional GDM cases diagnosed by one - step IADPSG criteria have higher risk of adverse perinatal outcomes and higher prevalence of risk factors than woman with NGT.
- History of GDM predicts 7 times increased risk of developing DM2 of the mother in further life. Studies showed an increased maternal risk for DM2 after GDM diagnosed by IADPSG criteria.
- Using IADPSG criteria induced more expense but also more cost - effectiveness. Studies showed, that preeclampsia, CS and NICU admissions were the outcomes with the greatest impact on cost effectiveness. A systemic review underlines that long-term benefits of lifestyle modification and treating GDM to preventing maternal DM2, should be included in financial considerations.
- Risk factor based selective screening to reduce costs and patient discomfort has no advantage to general screening in all pregnant women. Studies demonstrated a similar prevalence of risk factors in women with and without GDM. Furthermore, a selective screening missed up to 20% of GDM cases.

High-end technology, continuous glucose measurement, novel biomarkers are subjects of further studies to improve the understatement and ultimately treatment of GDM, but at the present time reserved for a very small number of patients in countries with developed health care system and not appropriate as screening tool. At last the golden goal for improvement in care and therapy of mothers with GDM and their babies worldwide should be a unification of a standardised screening method to finish confusion. In this context IADPSG criteria are the only outcome based criteria to diagnose and treat GDM, thereby reducing the fetal and maternal complications associated with GDM.

HRT: HOW TO PREVENT AND/OR TREAT (UTERINE) BLEEDING PROBLEMS

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FIGO (2011) has proposed to classify bleedings according to the PALM-COIN System, which needs, together with menstrual history, adequate diagnostic tools to define every bleeding according its etiology (Adenomyosis, Leiomyoma, Coagulopathy, Ovulatory Dysfunction, Endometrial Hyperproliferation, Iatrogenic, Not yet classified). All bleedings should be defined as "Abnormal Uterine Bleeding (AUB)" - any significant deviation from normal frequency, regularity, heaviness and duration of menstrual bleeding backed up by low serum ferritin and low hemoglobin levels. The terms "menorrhagia, hypermenorrhoea, metrorhagia" should be replaced by "Heavy Menstrual Bleeding (HMB)", whereas the terms "dysmenorrhoea, oligomenorrhoea, polymenorrhoea, amenorrhoea" still are recommended for use. According to this FIGO-classification most bleedings during perimenopause are "FIGO-O" bleedings, i.e. bleedings caused by ovulatory dysfunction. In our Beijing OB/GYN Hospital (treating more than 5.000 outpatients every day), AUB-O account for more than 70% of gynecologist consults during perimenopause, whereby (comparing with our hospital in Germany) bleedings in Chinese women seem to be more often compared to our German patients. Other etiology must be excluded, especially serious pathology such as carcinoma. Often bleedings also can occur for several reasons like caused by hyperplasia or polyps, which may need additional hormonal and/or non-hormonal treatment procedures. The presentation will cover especially AUB-O without HRT or during HRT. First luteal phase support using progestogens cyclically (2-3 weeks on, 1-2 weeks off) should be considered, whereby we mostly try to use more natural progestogens like progesterone (200 mg/d) or dydrogesterone (10 mg/d). However, in case of strong persisting bleedings we prefer chlormadinone acetate (CMA, 4 mg/d) or with less endometrial efficacy also medroxyprogesterone acetate (20 mg/d). If irregular bleedings persist, two main hormonal principles can be used to stop irregular AUB-O and to get again regular menstrual bleedings which are "functional bleedings" and do not need histological

diagnostics: The first principle is to "stabilize endometrium ("endometrial repair method"), whereby we have best practical experience using E2 transdermally, i.e. patches or gel (25-50 µg/d for 10-12 days). Also, sequential HRT (using higher dosages of the estrogen component) or, if contraception is wanted, oral combined contraceptive pills (COC) may be an option. Very good success using this principle also we have using the contraceptive vaginal ring because of its very constant release of ethinyl estradiol which mostly can stop those AUB-O bleedings, but has the risk of venous thrombosis in contrast to the use of transdermal estradiol. The second principle to stop ongoing irregular AUB-O-bleedings somehow is the opposite: "hormonal curettage" ("endometrial shedding method" by using short-time effective progestogens (10-12 days CMA 4mg/d) or short time higher dosages of COC (2-3 pills/d, for 5 days), whereby the high risk of venous thromboembolism must be considered. LNG-IUD is an option only for long-term treatment, because it can need long time (up to 6 months and longer) to get regular bleedings or amenorrhea. Very rarely heavy bleedings out of atrophic endometrium can occur also during perimenopause needing special non-hormonal treatment procedures which also will be presented.

HRT: WHI AUTHORS CLAIM WRONG DATA INTERPRETATION
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The Women's Health Initiative (WHI) trial was designed to address the risks and benefits of long-term use of HRT for the prevention of chronic disease in postmenopausal women. 8.506 women with uterus have been treated during 5.6 years with conjugated equine estrogens (CEE, 0.625 mg/d) combined with medroxyprogesterone acetate (MPA, 2.5 mg/d) compared with 8.102 women getting placebo, and within a separate estrogen-only arm 5.310 hysterectomized women have been treated during 7.2 years with CEE (0.625 mg/d). The combined arm was primarily stopped because a "global index" (which indeed was not defined before start of WHI) pointed to an increased risk using HRT despite only the risk of pulmonary embolism was significantly increased according to the adjusted confidence intervals. The estrogen-only arm was stopped since it was argued that estrogen-only would not protect from coronary heart disease, which was wrong: later it was clear that longer treatment should achieve not only cardiovascular protection but also protection from the development of breast cancer. The population of the WHI was, for initiation of HRT, too old (mean age at start 63 y.), and 50% of the women had most important risk factors like obesity, hypertension or being smokers, and up to 10% had already preexisting cardiovascular diseases. Recently two of the authors published that they regret that the WHI data have been misinterpreted for years (JE Manson, AM Kaunitz. NEJM 2016; 374:9-11): Its results are now being used inappropriately in making decisions about treatment for women in their 40s and 50s. Another WHI author very recently has given more insight about the history of the first publications claiming that most WHI-authors did not have enough time to look over all data before the detrimental JAMA (2002) publication was published (RD Langer. The evidence base for HRT: what can we believe? Climacteric 2017; 20: 91-96). Not only has hormone therapy prescribing by obstetrician–gynecologists and internists or family physicians decreased substantially, but the new generation of medical graduates and primary care providers often lacks training and core competencies in management of menopausal symptoms and prescribing of hormonal (or non-hormonal) treatments. Very recently Manson JE et al. published (JAMA 2017; 318:927-938) that not only during the interventional phase but also during cumulative follow-up of 18 years the mortality, most important endpoint of studies, was not increased. Neither all-cause nor cardiovascular nor cancer mortality was increased in both arms. Remarkably breast cancer mortality during estrogen-only was to a large extent (45%) significantly decreased, and surprisingly (considering being a disease of older women) also Alzheimer's or dementia mortality was significantly reduced. Derived from those results the presentation will stress the latest evaluation and guidelines for the use of HRT which should also involve a revival of HRT for the treatment of climacteric symptoms and certain preventive options in peri- and postmenopausal women.

CHROMOSOME ABNORMALITIES CAN BE INDUCED BY FERTILITY CENTER PRACTICES
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Chromosome abnormalities have been linked in the past to culture conditions such as temperature and Ph variations, as well as hormonal stimulation. Those reports were performed with older screening techniques (FISH), or ART methods no longer in use, and the subjects studied were not a homogeneous group. Our recent study (Munne et al. 2017) demonstrates that during human assisted reproduction, embryonic chromosome abnormalities may be partly iatrogenic. That study included 1645 donor oocyte cycles undergoing PGS by aCGH from multiple fertility clinics. The study found that euploidy rate was associated with the referring center and independent of other parameters. While the average euploidy rate per center ranged from 39.5 to 82.5% with a mean expected rate of euploidy was 68.4. This is the first study to show a strong association between center-specific treatment practices and aneuploidy rates in human embryos. That study was performed using aCGH which cannot detect mosaicism as well as NGS. A subsequent study by Sachdev et al. (2016) showed that the differences between centers were both in aneuploidy and mosaicism rates, with euploidy rates ranging from 36%-57%, aneuploidy from 18%-37%, and mosaicism from 16-44%, but when aneuploidy was high mosaicism was low and *vice versa*. The reasons from these differences could be many, one of them the culture conditions. Hickman et al. (2016) published significant differences in euploidy rate within the same center when using two different culture media. On the other hand, McCullough et al (2017) recently presented at ASRM that within the same IVF center, there were differences in euploidy rates between physicians and that this was linked to hormonal stimulation, with euploidy rates increasing with decreasing days of stimulation, decreasing dose/day but increasing MII numbers.

Hickman et al. (2016) Human Reprod, 31; Supp 1: i216- 217; P-203
Munné et al. (2017) Human Reprod, 32:743–749
Sachdev et al. (2016) Fertil Steril 106(Suppl): e156–7.
McCullough et al. (2017) ASRM

DETECTION PREGNANCY POTENTIAL OF MOSAIC EMBRYOS
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The objective of this study was to determine the pregnancy outcome potential of euploid, mosaic and aneuploid embryos, detected by PGS with Next Generation Sequencing (NGS). Blastocysts were assessed by trophectoderm biopsy followed by PGS by array CGH or High Resolution Next Generation (hr-NGS). If by hr-NGS, they were classified as aneuploid (>80% abnormal cells), mosaic (20-80% abnormal cells) or euploid (<20% normal cells). Those embryos replaced were followed to second trimester or later of pregnancy. When comparing aCGH and hr-NGS cycles in which euploid embryos were replaced including only those centers that used both techniques, the OPR per cycle was significantly higher for hr-NGS (62%) than for aCGH (54%) ($p<0.001$). In contrast, the replacement of embryos classified by hr-NGS as mosaic resulted in 24% miscarriages ($p<0.001$ vs euploid by NGS) compared to 5% for euploid embryos ($p<0.001$), and 37% OIR per cycle compared to 76% for euploid embryos ($p<0.001$). Mosaic embryos with <40% abnormal cells had an OIR of 50%, significantly higher than the 30% of mosaics with 40-80% abnormal cells and 6% of complex mosaics. There was no difference between monosomic and trisomic mosaics, between entire chromosome mosaicism or segmental mosaicism, or with the chromosome number involved in the mosaicism. This suggests that a different mechanisms of mosaicism formation for preimplantational and prenatal diagnosis. Of all the cycles with follow up, 25 of the aCGH pregnancies and 7 of the hr-NGS pregnancies resulted in chromosomally abnormal conceptions. Of these 32 discrepancies, 3 were below the resolution of the technique, and in one the DNA of the embryo did not match the DNA of the POC. The other 28 remaining discrepancies, 6 were mosaic by NGS, 7 mosaics by Prenatal Diagnosis, 14 could be caused by several factors, and one was a 6.5 Mb deletion missed by hr-NGS (Table 4 and 5). Two of the abnormal fetuses were trisomy 21 and one was mosaic trisomy 21, that is 3/4411 pregnancies (0.068%) or 1/1470, compared with the estimated risk of 1/270 for women 35 years old, or >10X less.

USING BLUE LIGHT TO SUPPRESS MELATONIN AND ACUTE PRETERM CONTRACTIONS
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Every tenth pregnancy ends prematurely, leading to numerous neurological, immunological and respiratory disabilities in the preterm newborn and a considerable burden on healthcare systems. Despite decades of research, there is currently neither a prophylactic nor an effective pharmacological treatment against preterm labor. Thus, there is a critical need to better understand the mechanisms driving uterine contractions during labor (both term and preterm) in order to develop effective new strategies for reducing preterm labor. Evidence in the past decade points to a novel brain signal that plays a significant role in the circadian timing of parturition, and thus may provide new avenues for regulating labor. Specifically, a potent interaction of melatonin receptor activation in concert with oxytocin-induced signal transduction has been shown to provide a key hormonal trigger for the initiation of uterine contractions in late term pregnant myometrium. Subsequent early stage clinical trials have tested the prediction that removing melatonin's drive to the pregnant woman's contracting

myometrium will reduce uterine contractions. In a series of published articles, we have demonstrated that in late term (>39 weeks gestation) pregnant volunteers one-hour-long exposures to white light (10,000 lux) consistently and significantly suppressed melatonin secretion as well as uterine contractions (in some cases completely). Furthermore, in collaboration with researchers at Brigham and Women's Hospital these findings were independently validated with late term pregnant women using blue light (75 μW/cm^2). Ongoing studies at two hospitals with blue light-emitting sleep masks are exploring the efficacy of using blue light to suppress preterm contractions. These novel insights are opening new vistas in the prevention and treatment of preterm labor and will help advance the development of safe, effective and affordable strategies to save millions of infant lives in both the developed and developing world.

References:
Sharkey J et al 2009 J Clin Endocrinol Metab 94: 421
Sharkey J et al 2010 J Clin Endocrinol Metab 95: 2902
Olcese J et al 2012 Reprod Sci 20: 168
Olcese J & Beesley S 2014 Fertility & Sterility 102: 329
Klerman EB et al 2016 Amer J Obst Gynecol 214: s336

SURGICAL MANAGEMENT OF VULVAR VESTIBULITIS SYNDROME BY VESTIBULECTOMY

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Vulvar vestibulitis syndrome (VVS), also called vestibulodynia or localised provoked vulvodynia (LPV), a subset of vulvodynia, is a complex vulvar pain syndrome (VPS) characterised by altered pain sensation. VVS causes severe dyspareunia and affects mainly young women. The etiology is unknown. Recent studies on LPV have demonstrated activation of vestibule-associated lymphoid tissue (VALT) which may emerge as a response to local infection or inflammation. This immune activation enhances excessive epithelial nerve growth in the vestibular mucosa which then leads to allodynia. No uniformly effective treatment modality exists. Clinical algorithms have been developed, and such algorithms are useful and augment the management of problematic VVS cases. Surgical treatment by vestibulectomy is usually offered to the most severe cases refractory to conservative treatment modalities, including discontinuation of oral contraceptives, physical therapy for pelvic floor dysfunction, and antimycotic maintenance therapy. Vestibulectomy operation is strikingly effective is such severe cases, and is associated with high patient satisfaction. Vestibulectomy is a day surgery operation. Postoperative complications of posterior vestibulectomy are rare. Potential complications include postoperative bleeding, postoperative wound infection, Bartholin's cyst development, and sometimes scarring. Recurrence rate is low if proper pragmatic operative technique is used. One problem is the lack of randomised controlled trials of vestibulectomy. This is not surprising, however, since vestibulectomy is generally offered as the last resort in the most severe cases hence introducing selection bias. In vestibulectomy operation, the vestibular mucosa containing high density of nerve fibers and nerve fiber proliferation is removed from 2 to 10 o'clock, and replaced by vaginal mucosa, properly liberated. Long-term follow-up studies have demonstrated that this operation is associated with highly favorable outcome, and significantly improves the quality of life of such desperate women with severe VPS.

IMPACT OF DIFFERENT SERMs ON BREAST CANCER

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SERMs represent a class of drugs with an ever-increasing number of compounds, characterized by their action as tissue-specific estrogen receptor (ER) agonists/antagonists. This pharmacologic approach may offer the opportunity to achieve favorable estrogenic effects, without negative stimulatory effects on the endometrium and breast. SERMs are chemically diverse compounds that lack the steroid structure of estrogens, but possess a tertiary structure that allows them to bind to the estrogen receptors (ERs). The mechanism of mixed agonist/antagonist may differ depending on the chemical structure of the SERM, but at least for some SERMs, it appears to be also related to differential ER alpha and ER beta expression, the ratio of co-activator to co-repressor proteins in different cell types and the conformation of the estrogen receptor induced by drug binding, which in turn determines how strongly the drug/receptor complex recruits co-activators (resulting in an agonist response) relative to co-repressors (resulting in antagonism) .In conclusion, each SERM, upon bonding with the receptor, cause the coactivator proteins that bond with the SERM-estrogen receptor complex to be different for each SERM and for each tissue, stimulating and blocking the different genes with different biological responses. This entire molecular mechanism determines that each SERM has different responses. There is an extensive list of compounds that can be considered SERMs for which there are available results in either in vitro cellular models or in vivo animal and human experiments. Approximately 100 molecules with a SERM-like pharmacological profile were described in a recent review which provides a summary of the main SERM groups, classified according to chemical structure. Certain phytoestrogens, such as genistein and daidzein, also appear to have a SERM-type pharmacological profile. Presently, the two chemical classes of SERMs of greatest clinical use are the derivatives of triphenylethylene (most especially tamoxifen, which is used for the prevention and treatment of breast cancer) and the derivatives of benzothiophene (with RLX as an example, indicated for the prevention and treatment of postmenopausal osteoporosis, and for the prevention of breast cancer in the USA. New SERMs are being developed clinically for the prevention and/or treatment of osteoporosis and breast cancer and optimally for the treatment of vaginal atrophy (Bazedoxifene, Lasofoxifene, Ospemifene). The evidence suggests that each SERM needs to be independently studied and their clinical responses evaluated. A new concept, TSEC (Tissue Selective Estrogen Complex), has the potential to demonstrate the benefits of SERMs along with the additional benefits of estrogens, apparently without the need for gestagens. One could define the therapeutic combination of a SERM with estrogen. Data showing that the bazedoxifene-conjugated estrogens combination significantly reduces hot flushes, improves vaginal atrophy and increases bone mass with little or no uterine or breast stimulation.

GUIDELINES FOR HPV SCREENING IN EUROPE

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Primary screening for high-risk HPV genotypes (hr-HPV) generally detects more CIN2, CIN3 or cervical cancer compared to cytology at cut-off ASC-US or LSIL, but is less specific. According to the last European guidelines for quality assurance in cervical cancer screening (von Karsa et al. Papillomavirus Res 2015; 1:22-31), primary HPV testing can be used only in a population-based program for cervical cancer screening; HPV testing outside such programs is not recommended. In contrast to United States, only one primary test (either cytology or testing for oncogenic HPV) should be used at any given age in cervical cancer screening in Europe. Cervical cancer screening program should adopt a HPV primary test for use only if it has been validated by demonstrating reproducible, consistently high sensitivity for CIN2+ and CIN3+ lesions, and only minimal detection of clinically irrelevant, transient HPV infections. HPV tests (neither commercial nor in-house tests) that have not been clinically validated should not be used in clinical practice. HPV testing should be performed only on samples processed and analyzed in qualified laboratories, accredited by authorized accreditation bodies and in compliance with international standards. The laboratory should perform a minimum of 10,000 HPV tests per year. Routine HPV primary screening can begin at age 35 years or above and should not begin under age 30 years. HPV primary screening can stop at the upper age limit recommended for cytology primary screening (60 or 65 years), provided a woman has had a recent negative test. The screening interval for women with a negative HPV primary test result should be at least 5 years and may be extended up to 10 years depending on the age and screening history. Screening program should carefully monitor management of HPV-positive women and must adopt specific policies on triage, referral and repeat testing of women with positive primary HPV test. At present, cytology triage is the preferred triage method in Europe. Women testing positive for oncogenic HPV at primary screening should be tested without delay for cervical cytology; direct referral to colposcopy of all HPV-positive women is not recommended. The clinical accuracy of HPV primary testing on self-collected samples taken for cervical screening is sufficient to conduct organized, population-based pilot program for women who have not attended screening despite a personal invitation and a personal reminder. The feasibility and sustainability of the HPV-based screening program should be assured through adequate resourcing and coordination, including coordinated planning, feasibility and pilot studies, and quality-controlled rollout across a country or region.

HELLP SYNDROME IN PREGNANCY

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HELLP syndrome represents severe complication of pregnancy characterized by hemolysis, elevated liver enzymes and low platelets. Timely recognition if this disorder is essential to prevent very high extent of maternal and fetal complications, as well as mortality. Hemolysis occurs due to microagiopathic hemolytic anemia. Presence of schizocytes indicates hemolysis. The levels of LDH are elevated due to destruction of red blood cells. Free hemoglobin is converted to unconjugated bilirubin which binds to haptoglobin. Hemoglobin -

haptoglobin complex is rapidly eliminated through the liver leading to low, even immeasurable haptoglobin values. Elevation of liver enzymes reflects hemolysis and involvement (lesion) of the liver in this process. Low platelet count is a consequence of their consumption. The diagnosis of HELLP syndrome is established according clinical manifestations, examination, laboratory findings and radiological examinations. As differential diagnosis, one must consider immunologic thrombocytopenic purpura, acute fatty liver in pregnancy, hemolytic-uremic syndrome, thrombotic thrombocytopenic purpura and systemic lupus erithematodes. There are three treatment modalities in management of pregnancies complicated with HELLP syndrome. Immediate delivery after diagnosing HELLP syndrome in pregnancies older than 34 gestational weeks. In pregnancies between 27 i 34 weeks of gestation initial stabilization of mother's condition, corticosteroid treatment and delivery after 48 hours. Third approach is conservative, it implies 72 hours follow up in pregnancies less than 27 weeks of gestation. Therapy has to be implemented in intensive care units and it consists of ventilatory support, hemodialysis is severe cases, anticoagulant therapy, low doses of aspirin, heparin, antithrombin, fresh frozen plasma, and corticosteroids. The incidence of HELLP syndrome in Clinic of Gynecology and Obstetrics, Clinical Centre of Serbia, tertiary health care facility, in two years period was 0.27%. Average age of patients was 32 years, 79% were primiparous, with spontaneous pregnancies in 81.6% of cases. The diagnosis was established according to clinical symptomes, and laboratory findings indicating hemolysis. According Mississippi classification Class of 2 HELLP syndrome was present in 52.6% of cases, and Class 3 in 47.4% of cases. There were no patients with Class 1 of the syndrome. The majority of patients (97.4% of cases) were delivered by emergency cesarean section. Average gestational age in time of delivery was 32.76 weeks. Pregnancies were terminated before 27 weeks of gestation in 10.5% of cases, between 27 i 34 weeks in 52.6% and after 34 weeks in 36.8% of cases. Average time needed to establish the diagnosis was less than two days. Average time to normalisation of platelet count was 2.82 days, transaminases 4.5 days and LDH 6.32 days. The average weight of newborns was 1635g. Most common fetal complications were IUGR, oligoamnion i asphyxia. IUGR was present in 84.2% of cases. Intrauterine fetal demise occurred in only one patient (2.6%), in pregnancy of 25 weeks of gestation. All patients were treated with antihypertensive therapy. Corticosteroide treatment was applied in 60.5% of cases, primarily in order to promote fetal lung maturation. Blood transfusions were administered in 97.4%, and Antithrombin III in 44.7% of cases. HELLP syndrome is still diagnostic and therapeutical challenge in modern obstetrics. Precise diagnosis and early onset of treatment leads to better maternal and feral outcomes.

LITERATURE:

Haram K, **Svendsen E**, **Abildgaard U**. The HELLP syndrome: Clinical issues and management. A Review *BMC Pregnancy and Childbirth* 2009, **9**:8 doi:10.1186/1471-2393-9-8.

Medhioub Kaaniche F, Chaari A, Turki O, Rgaieg K, Baccouch N, Zekri M, Bahloul M, Chelly H, Ben Hamida C, Bouaziz M. Up-to-date on the HELLP syndrome (Hemolysis, Elevated Liver enzymes and Low Platelets. Rev Med Interne. 2016 Jan 7. pii: S0248-8663(15)01124-8. doi: 10.1016/j.revmed.2015.12.009.

Mao M, Chen C. Corticosteroid Therapy for Management of Hemolysis, Elevated Liver Enzymes, and Low Platelet Count (HELLP) Syndrome: A Meta-Analysis. Med Sci Monit. 2015; 21:3777-83.

Tovar-Rodríguez JM, Valle-Molina L, Vargas-Hernández VM, Hernández-Vivar LE, Hernández-Aldana FJ, Moreno-Eutimio MA. Profile dipper/non-dipper in patient with severe preeclampsia, eclampsia and HELLP syndromeduring pregnancy and puerperium. Ginecol Obstet Mex. 2015;83(8):477-486.

Dusse LM, Alpoim PN, Silva JT, Rios DRA, Brandão AH, Cabral ACV. Revisiting HELLP syndrome. Clinica Chimica Acta 451 (2015) 117–120.

MANAGING OBESITY: THE PLACE OF BARIATRIC SURGERY

Gerhard Prager, Austria

Background: The worldwide spread of Obesity and its related diseases are a challenge for the healthcare systems in the 21st century. Diabetes, Hypertension, Cardiovascular disease and cancer are consequences of obesity. This talk will highlight the place of bariatric surgery in the treatment armamentarium regarding obesity. **Material and Methods:** Modern Bariatric surgery respects the patient's individual life circumstances and comorbidities. Operations are performed by laparoscopy – hence enabling short hospital stay and quick recovery. For high BMI classes operations with a malabsorptive component provide excellent weight loss in the long term. Worldwide more than 500.000 operations are performed year by year. **Results:** Depending on the different operations, diabetes remission rates up to 80% and Excess Weight Loss up to 75% can be achieved. Several studies confirm these excellent results up to 20 years and more. Patients need to be followed lifelong to avoid deficiencies and nutritional problems. **Discussion:** Bariatric Surgery is by far the most effective way to treat obesity and its related comorbidities. Patients should be accompanied through the process by a multidisciplinary team to optimize the long-term success of the operation.

THE PROS AND CONS OF ANEUPLOIDY EMBRYOS TRANSFER

Siobhan Quenby, UK

Human reproduction involves high levels of mosaicism amongst embryos and as such is very different from other species. Mosaicism is so prevalent that it must be considered as a part of normal human reproduction. The questions is should and when should we attempt to interfere with this part of human physiology that has been evolved over millions of years. The **pros** of Aneuploid embryo transfer are that it mimics normal physiology and allows the maternal decidua to decide which embryo to invest in. The maternal decidua is exceptionally good at this selection process as evidenced from existing clinical data, where out of 450 pregnancies in women with recurrent miscarriage and balanced translocations only one live birth had an unbalanced translocation when 225 live births with unbalanced translocations would have been predicted. In addition, some embryos thought to be aneuploid have led to healthy live births presumably because they were mosaic so that the testing was not representative of the whole embryo. The **Cons** of aneuploidy embryo transfer are that some couples are so traumatised by their experience of miscarriage that they can only embark on future conception attempts if the risk of miscarriage is minimised by euploid embryo transfer. If the cause of the couple's sub-fertility is failure of the decidual selection mechanism then there is a case for euploid embryo transfer to correct this. Couples with loss of decidual selection can present either as recurrent miscarriage where pregnancies that should have been lost at menstruation persist and present as miscarriage. Karotyping of their miscarriages reveals different aneuploidys with each loss. Alternatively, the selection mechanism may be too severe so that all mosaic embryos are rejected and the couple present as recurrent failed IVF attempts. A solution to the opposing sides of this debate should be to have a personalised approach. This approach involves collecting as much information about the cause of the couple's sub-fertility as possible, to understand the couple's emotional financial resources and to come to a treatment plan specific for each couple.

CREATION OF GERM CELLS IS THE SOLUTION FOR FERTILITY PRESERVATION

Sjoerd Repping, Netherlands

Fertility preservation currently entails the cryopreservation of male or female gametes before gonadotoxic treatment or before age-related fertility decline. Once cryopreserved, these gametes will largely maintain their developmental potential and can be thawed in the future to allow for fertilization in vitro and subsequent embryo transfer. An inevitable drawback however is that the number of stored gametes is limited and for the most part their use requires costly and burdensome treatments such as ICSI. On the contrary, the use of stem cells to restore fertility theoretically removes the necessity to store gametes before gonadotoxic treatment and could perhaps also allow for future natural conception. This talk will focus specifically on the use of spermatogonial stem cells to preserve and restore male fertility.

COMMERCIALIZATION OF UNPROVEN TECHNOLOGIES IN REPRODUCTIVE MEDICINE

Sjoerd Repping, Netherlands

Novel treatments or add-ons are continuously and rapidly introduced into clinical care to answer the demands of infertile patients to achieve pregnancy. The introduction of such technologies goes through the hands of reproductive specialists, who should follow the primary principle of medicine, first do no harm. At the same time, the push to help patients not only stems from patient demands but equally from commercial companies trying to rapidly make a profit on their products as well as from reproductive specialists that try to outcompete other clinics or to increase the earnings of their own clinic. This then inevitably leads to a misbalance between commercial and medical interests, with patients being the victims. This talk will use multiple examples to illustrate that novel technologies are repeatedly introduced into clinical care without proper preclinical and clinical studies on effectiveness and safety.

TIME LAPSE TO OPTIMIZE EMBRYO CULTURE: FIRST STEP TOWARDS AUTOMATION IN IVF

Laura Francesca Rienzi, Italy

There is today a poor standardization between centers in the embryo culture system used. Volume of the culture media, atmospheric conditions, temperature and pH are highly diverse between centers. These aspects may significantly affect the overall efficacy of the

technique. With the introduction of time-lapse in IVF new platforms combining embryo culture and evaluation are available. These instruments are aimed at standardizing embryo culture with several important potential advantages including: ● Minimization of operation-caused errors and discrepancies; ● Alleviation of operators from different tasks with better exploitation of human resources;
● Opportunity to normalize chemical and physical conditions (including temperature, O2 tension and pH). Over from timelapse, automated vitrification process and robotic platforms combining embryo culture, evaluation and manipulation are expected in the near future. Such integrated platforms are very likely to provide the standardization of IVF, guaranteeing high standard of quality for every IVF center.

THE LONG-TERM CARDIOVASCULAR CONSEQUENCES OF SGA

Lila Seidl-Mlczoch, Austria

Every year cardiovascular disease accounts for 3.9 million deaths in Europe and 1.8 million in the EU. Preterm birth rate in Europe varies between 5,5 to 11% in recent years. Early neonatal deaths are due to preterm delivery in 28%. In recent years care for preterm babies has improved and the overall survival rate has dramatically increased. Nevertheless, preterm delivery in addition to other prenatal risk factors such as small for gestational age (SGA) has been shown to have an impact on later life. Intrauterine growth restriction (IUGR) has been associated with long term neurodevelopmental problems. Recent research has drawn the focus on long term morbidity in adulthood. Being small for gestational age and preterm makes these babies more susceptible for adiposity, diabetes and cardiovascular disease overall known as metabolic syndrome in later adulthood. It has been proposed that changes are not only already present in fetal life in these babies but seem to have their origin in fetal life as proposed by Barker in 1992. He postulates that these diseases originate through malnutrition during fetal life. Coronary heart disease for example is associated with low birth weight and low placental weight. In addition, it seems to be correlated to rapid increase in body mass index after the age of 2. Hemodynamic alterations and adaptations as a response to intrauterine starvation are thought to influence developing organs with long term consequences in adult life. It has been shown that children born small for gestational age have increased blood pressure, elevated heart rates, impaired glucose regulation, atherogenic lipid profiles, arterial stiffness and as a long-term problem artherosclerosis and coronary heart disease in adulthood. Research in this field has led to the development of screening tools to recognize fetuses and children at risk for long term cardiovascular consequences. Recent studies have shown that cardiac dysfunction in IUGR is an early and progressive event and cardiac remodeling persists into young adulthood. Aortic intima thickness is currently a helpful noninvasive marker of preclinical atherosclerosis and is used as a screening tool for atherosclerosis in young children born with SGA.

CIN 2-3 IN PREGNANCY –OBSERVATION OR LLETZ IN THE FIRST 15 WEEKS? THE ISRAELI SURVEY ABOUT THE SAFETY OF LLETZ IN THE FIRST 15 WEEKS OF PREGNANCY

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** The Israeli Colposcopy Network: Rami Bali, Rami Mushonov, Jacob Niv, Tal Zion, Eduardo Schechter, Zvi Vaknin and The Israeli Society of Colposcopy and Cervical Pathology*

Introduction: Cervical intraepithelial neoplasia 2- 3 (CIN 2-3)] is a premalignant lesion and Large Loop Excision of The Transformation Zone (LLETZ) is the recommended treatment in women diagnosed with CIN 2 or CIN 2-3 lesions. During pregnancy observation is recommended because of the belief that during pregnancy there is no progression to malignancy and the treatment is associated with severe complications. Summarizing data from literature, pregnant women over the age of 25 years with CIN 2-3 lesion has a risk of 7.4% to be diagnosed with invasive cervical cancer after delivery. The aim of the present study is to describe the Israeli experience in pregnant women diagnosed with CIN 2-3. **Methods**: We collected data of 106 pregnant women that were diagnosed with CIN 2-3 between January 2006 and August 2017. 85 of them were treated in our clinics and we received data from members of the Israeli society of colposcopy about 21women. **Results**: 61 women were followed and 45 underwent LLETZ during pregnancy. Comparing the observation group to the LLETZ group the mean age 31.8 years versus 32.4 years respectively, mean LLETZ height 0.93 cm versus 0.92 cm, smoking history 14% versus 16.2%. Free margins at LLETZ in our study was in 65.9% of the women compared to 73.1% of the women in a study of our population. In 61 women who were observed and evaluated after delivery the final pathological results were: 4 (6.6%) diagnosed with cervical cancer, 40 (65.6%) had CIN 2-3, 17 (27.9%) had CIN1 or normal histology. Of the 45 women who underwent LLETZ during the first trimester invasive cancer was diagnosed in 2(4.4%), CIN 2-3 or AIS in 40 women (88.9%) and 3 patients (7.3%) had CIN 1 or normal histology. 38 women continued their pregnancy, 34 (89.5%) of them had term deliveries, two (5.3%) had late premature deliveries (34, 36 weeks) and two women (5.3%) had missed abortion after the LLETZ. **Conclusions:** The risk of cervical cancer is 5.7 % in pregnant women with CIN 2-3 diagnosed during pregnancy. The LLETZ procedure during the first 15 weeks of pregnancy is safe. The complications rate of severe bleeding (2.2%), abortion (4.4%), and late premature delivery (4.4%) are low and similar to the general population. In conclusion, we suggest reconsidering the indications and contraindications regarding CIN2-3 treatment during pregnancy in patients older than 25 years old, and performing this operation more liberally during the first trimester as it has been shown to carry minimal risks and significant benefits.

HRT: HAVE THE RISKS BEEN OVERESTIMATED? WILL IT REBOUND TO THE PRE-WHI ERA? YES

Tommaso Simoncini
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Hormone replacement therapy (HRT) was exposed to a dramatic impact by the first publications of the Women's Health Initiative (WHI) hormone therapy trial in 2002. The double-blinded, placebo-controlled, randomized clinical trial was conducted among US postmenopausal women aged 50 to 79 years at enrollment. The average age of patients in both trial's arms was 63 years: the average patient using hormone therapy is appreciably younger and usually commencement of hormone therapy is not recommended for women who are aged >60 years. This trial tested the most common formulations of HT: conjugated equine estrogens (CEE) plus medroxyprogesterone acetate (MPA) for women with an intact uterus and CEE alone for women with hysterectomy. The CEE plus MPA trial was stopped after 5.6 years due to an increased risk of breast cancer; the CEE-alone trial was stopped after 7.2 years due to an increased risk of stroke. Oestrogen deficiency is the principal pathophysiological mechanism that underlies menopausal symptoms. The addition of progesterone aims to protect against the consequences of systemic therapy with oestrogen only in women with intact uteri: namely, endometrial pathologies, including hyperplasia and cancer. New and emerging menopausal therapies have the potential to fill an unmet need in the post-WHI era for effective relief of menopausal symptoms with improved safety profiles.HT is the most effective treatment for vasomotor symptoms (VMS)with reductions in both frequency and severity in the order of 75%. Cardiovascular disease (CVD) risk factors do not automatically preclude HT. Initiation of hormone therapy is usually contraindicated in women with a personal history of breast cancer or venous thromboembolism, or those with a high risk for breast cancer, thrombosis or stroke. In order to avoid undue chronic stimulatory effects on the endometrium, control menstrual bleeding, avoid abnormal bleeding and avoid cancer development, the combination of the estrogen with a progestogen is needed. Trans-dermal estrogen (≤50 µg) is associated with a lower risk of deep vein thrombosis, stroke, and myocardial infarction compared to oral therapy and may bethe preferred mode of treatment in women with an increased thrombosis risk, such as obese women and smokers, do not respond to non-hormonal therapies. In addition, unlike oral oestrogen, transdermal oestradiol does not increase the risk of gallbladder disease. Genitourinary syndrome of menopause (GSM) describes vulvovaginal changes, as well as urinary symptoms and recurrent urinary tract infections. Vaginal dryness is common after menopause and unlike VMS usually persists and may worsen with time.GSM is effectively treated with either vaginal or systemic oestrogentherapy. Importantly, low-dose vaginal oestrogen improves vaginal atrophy without causing proliferation of the endometrium. Recent strategies have focused on eliminating the need for progestins either through use of topical estrogens without a progestin for VVA or by combining estrogen(s) or DHEA with potentially safer options (e.g., micronized progesterone, SERMs) to reduce endometrial stimulation. The treatment should be individualized to identify the most appropriate HT dose, formulation, route of administration, using the best available evidence to maximize benefits and minimize risks, with periodic reevaluation of the benefits and risks of HT.

THE IMPLICATIONS OF FAT ACCUMULATION DURING MENOPAUSE

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Menopause is associated with a rapid increase in fat mass and a redistribution of body fat from the periphery to the abdomen, resulting in a transition from a gynoid to an android pattern of fat distribution. In postmenopausal women, increase in body mass index (BMI) and proportion of visceral fat are strongly correlated with the development

of hypertension, dyslipidemia, insulin resistance and with a number of metabolic risk factors for cardiovascular disease (CVD). Abdominal fat can be considered an endocrine organ: it is able to secrete adipokines and other substances. Altered adipokine secretion could link abdominal obesity to its metabolic consequences, such as insulin resistance, type 2 diabetes and the metabolic syndrome. Central adiposity and visceral adiposity could influence the distribution of cardiovascular fat, defined as the fat surrounding the heart and arteries, and are correlates with CVD risk. Cardiovascular fat is a metabolically active organ that secretes different proinflammatory and anti-inflammatory molecules. Postmenopausal women have greater volumes of epicardial fat (EAT), paracardial fat (PAT), total heart fat (TAT) compared with premenopausal women. Volume of PAT are greater in women with higher declines in estradiol levels, supporting the hypothesis that menopause is associated with cardiovascular fat redistribution. Postmenopausal women with greater volume of PAT have a greater risk of coronary heart disease compared with premenopausal women. Adipose tissue could be an 'insulator' and interfere with normal thermoregulatory mechanisms of heat dissipation. Women with higher abdominal adiposity, particularly subcutaneous adiposity, report an increase of vasomotor symptoms (VMS) during the menopausal transition and in early postmenopause. Healthy weight in midlife women early in the menopausal transition may help to prevent VMS. Overweight women may suffer from psychosocial consequences, with a significant impact on self-esteem and general well-being: obese postmenopausal women have lower health-related quality of life, in physical functioning, energy, and vitality compared with normal-weight women. Obesity is also a major risk factor for pelvic floor dysfunction, some cancers (endometrial, breast and colon) and musculoskeletal disorders, especially osteoarthritis (a highly disabling degenerative disease of the joints). Endometrial cancer is the most common gynecologic cancer. It is estimated that risk of endometrial cancer increases about 59 % for every 5-unit increase in body mass index (BMI, kg/m2), and overweight and obesity are responsible for 57 % of all case of endometrial cancer in USA. Obesity increases exposure to estrogen unopposed by progesterone in pre-and postmenopausal women. Pelvic floor dysfunction is more common in the overweight and obese women. Risk factors for developing Pelvic organs prolapse (POP) can be divided into obstetric, lifestyle, comorbidity, aging, social, pelvic floor factors and surgical factors. The most important lifestyle factor is a higher BMI. Obesity may impair pelvic floor function increasing intra-abdominal pressure, that damages pelvic musculature and nerve, this is linked to conduction abnormalities and obesity related co-morbidities including diabetic neuropathy and intervertebral disc herniation. It could be necessary to encourage lifestyle measures in addition to therapeutic interventions throughout the menopausal transition in order to controlling menopausal obesity and its implication.

CONTRACEPTIVES AND THROMBOTIC RISKS: WHAT IS THE TRUE RISK?

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Almost one half of all pregnancies are unplanned, making it important for patients to know about effective forms of contraception. Combined hormonal contraceptive preparations (pill, patch, vaginal ring) are not as effective as intrauterine devices or tubal ligation, but offer more protection than barrier or calendar methods. Among the many hormonal preparations, the contraceptive pill is used most often. Heightened publicity about hormonal contraception and thrombosis risk have led to multidisciplinary discussions on the true risk. The overall relative risk of thrombosis in combined oral contraception users is four- to eightfold higher compared to 1-2 per 10,000 reproductive-aged women, whereas the absolute risk for a healthy adolescent on this therapy is only 0.05% per year. The thrombotic risk is affected by estrogen dose, type of progestin, mechanism of delivery, and length of therapy. Oral progestin-only contraceptives including the intrauterine LNG releasing systems and implants carry minimal or no thrombotic risk. A personal history of thrombosis, persistent or inherited thrombophilia, and numerous lifestyle choices also influence thrombotic risk. In observational studies, when combined hormonal contraceptives containing third- or fourth-generation progestins (norelgestromin, etonogestrel, drospirenone) were compared with levonorgestrel-containing preparations, an increased risk for thrombosis was found. This included oral, vaginal, and transdermal products. Prospective cohort studies, however, did not find an increased risk with newer progestins compared with products containing a second-generation progestin. This suggests that observational studies were unable to control for all known risk factors. Today medicine is taking an individualized approach, and contraception has to be individualized too. Risk factors for VTE, including obesity, age, family/personal history, diabetes, and hypertension, have to be assessed to determine the true risk. In the future, combined hormonal contraceptives with components that resemble the natural hormone and are delivered by an alternate, nonoral route should be tested.

HRT: HAVE THE RISKS BEEN OVERESTIMATED? WILL IT REBOUND TO THE PRE-WHI ERA? NO!

Sven Skouby
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Based on Women's Health Initiative (WHI) data, the use of menopausal HT for fewer than 5 years is a reasonable option for the relief of moderate to severe vasomotor symptoms. The risks seen with estrogen plus progestin therapy suggest careful periodic reassessment of the ongoing therapy needs for women taking estrogen plus progestin therapy. The more favorable profile of estrogen therapy allows for individualized management with respect to duration of use when symptoms persist. For both estrogen therapy and estrogen plus progestin therapy, the baseline risk profile of the individual woman needs to be taken into account. Menopausal HRT is not suitable for long-term prevention of CHD given risks of stroke, venous thromboembolism, and breast cancer (for estrogen plus progestin therapy) found in both clinical trials and in observational studies. Therefore, despite the primary reports from the WHI study have overestimated risks, the above considerations lead to contemporary recommendations which counteract a rebound to the pre WHI era as, 1. the use of menopausal hormone therapy in symptomatic postmenopausal women should be based on consideration of all risk factors for cardiovascular disease, age, and time from menopause, 2. the use of transdermal as compared with oral estrogen preparations may be considered less likely to produce thrombotic risk and perhaps the risk of stroke and coronary artery disease, 3. the use of a progestin is necessary in women with intact, but micronized progesterone is considered the safer alternative, 4. in symptomatic menopausal women who are at significant risk from the use of hormone replacement therapy, the use of selective serotonin re-uptake inhibitors and possibly other nonhormonal agents may offer significant symptom relief.

HRT: CARDIOVASCULAR RISK OR PREVENTION? RISK

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When deciding whether to have post-menopausal hormone replacement therapy (HT), it's important to understand the risks. It's also important to consider HRT as only one of a range of interventions to improve menopausal and post-menopausal health and wellbeing. Many studies on HT have been published over the past 15 years that have highlighted the potential risks. Consequently, both women and doctors have been reluctant to use HT. More recent evidence and the National Institute for Health and Care Excellence's (NICE) indicate that the risks of HRT are small and are usually outweighed by the benefits. The Women's Health Initiative (WHI) results from the RCT part show that HT does not prevent coronary events or overall chronic disease in postmenopausal women as a whole. Subgroup analyses suggest that timing of HT initiation influences the relation between such therapy and coronary risk, and its overall risk-benefit balance, with more favorable effects (on a relative scale) in only younger or recently menopausal women and not in older women or those further past the menopausal transition. However, even if the RR do not vary by these characteristics, the low absolute baseline risks of younger or recently menopausal women translate into low ARs in this group. In contrast, findings from the intervention and extended postintervention follow-up of the 2 WHI hormone therapy trials do not support use of this therapy for chronic disease prevention because of increased risk and should be noted when long term or late postmenopausal HT is considered.

FERTILITY PRESERVATION IN BRCA MUTATION CARRIERS: READY FOR PRIME TIME?

Edgardo Somigliana, Italy

Fertility counseling of BRCA mutated women is a complicated process, with several entangled medical and psychosocial aspects to be concurrently considered. Three main points deserve consideration. Firstly, the risk of ovarian cancer does not markedly affect the chances of natural pregnancy because of the low risk of developing this malignancy before 40 years. Considering that women lose their ability to bear children at a mean age of 41 years, the suggested policy of prophylactic bilateral adnexectomy at age 40-45 is not expected to significantly affect the lifespan chances of natural pregnancy.

Secondly, available evidence suggests that ovarian reserve may be partly reduced in BRCA mutations carriers. This finding is not expected to significantly impact on the chances of natural pregnancy but it may affect the effectiveness of Assisted Reproductive Techniques in general and oocytes cryopreservation in particular. This aspect is of relevance considering that, in contrast to ovarian cancer, breast cancer before age 40 is not rare. Egg banking at the time of the diagnosis of this cancer may be unsatisfactory if the ovarian reserve is low. Thirdly, one has also to consider the possibility of preimplantation genetic diagnosis (PGD) in BRCA mutations carriers in order to select non-mutated embryos. In women refusing the possibility to transmit the mutation to the offspring and opting for PGD, oocytes cryopreservation at young age would be of utmost interest because of the possibility to retrieve a higher number of high quality oocytes and to perform the collection in a non-urgent setting. In conclusion, based on the current knowledge, a unique and univocal clinical management cannot be recommended but a detailed and in-depth counseling to women is warranted. Even if a systematic policy of fertility preservation in young age cannot be advocated, this option deserves to be carefully discussed with the woman.

PREECLAMPSIA IS NOT A CARDIAC DISEASE

Annetine Staff, Norway

Pre-eclampsia is a pregnancy specific multisystem disorder defined by new-onset hypertension and proteinuria (or pre-eclampsia associated features in the absence of proteinuria) after gestational week 20. Primiparous and obese women, as well as women with multiple fetuses, large placentas and chronic inflammatory diseases, are at increased risk for developing pre-eclampsia. The speaker will in this debate argue that pre-eclampsia requires the presence of placenta or residual placental compounds (as in postpartum pre-eclampsia), and that pre-eclampsia is not primarily a cardiac disease, the latter being argued by the opponent. The relative contribution of maternal predisposing factors versus placental factors to its pathophysiology is however not well understood. The talk will revisit the classical “two-stage model” of pre-eclampsia, as proposed by Redman et al in 1999, where incomplete placentation is seen as the first of two stages of pre-eclampsia, typically of early onset. Maternal “intolerance” of fetal cells and failed uteroplacental spiral artery remodelling has been a proposed pathway for poor placentation, which however involves several mechanisms. The second stage comprises dysfunctional uteroplacental perfusion and placental oxidative stress, followed by secretion of inflammatory factors to the maternal circulation, with ensuing generalized maternal vascular inflammation and pre-eclampsia signs (maternal hypertension and proteinuria). We have recently suggested (Redman, Sargent and Staff, Placenta 2013) that the mechanisms leading to a dysfunctional uteroplacental circulation may involve additional mechanisms to poor placentation, and that syncytiotrophoblast (STB) stress, with upregulation of some proteins (as exemplified by “antioangiogenic proteins”) and downregulation of others (exemplified by “proangiogenic proteins”) is the common final pathway. We argue that maternal circulating angiogenic factors are markers of STB stress, not of preeclampsia per se. We have proposed two major forms of placental dysfunction in pre-eclampsia: one extrinsic cause (poor placentation) and one intrinsic cause (villous overcrowding). The first placental cause of pre-eclampsia is more often of the early-onset type and with a growth restricted fetus, often predicted by an increased anti-angiogenic profile in maternal blood early in pregnancy. The second type is associated with large and term placentas, where the placenta has reached its capacity limits, leading to overcrowded terminal villi and impeding intervillous perfusion with increasing intervillous hypoxia and STB stress. As there is no antedecent placenta pathology, fetuses are well-grown and prediction with maternal circulating biomarkers of placental origin is less efficient, typically seen in late-onset type of pre-eclampsia. Our model explains important differences of early- and late-onset pre-eclampsia, including their relation to maternal circulating placenta-associated proteins used as biomarkers for the syndrome (Redman and Staff, AJOG 2015). The talk will also argue that there is no condition such as “maternal” pre-eclampsia, as all pre-eclampsia originate in the placenta. We suggest however that maternal factors may contribute two both stages of pre-eclampsia, the first by affecting either placental pathways to STB stress and the latter by amplifying the effects of STB stress on maternal vasculature.

FERTILITY PRESERVATION: NEW APPROACH

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Each patient is unique. The impact of a given treatment on fertility can vary and so can the time available before starting lifesaving treatments. Patient age, marital status, personal wishes, religious and cultural constraints and prognosis may all affect decision making. Fertility preservation strategy before, after and during cancer treatment include ovarian transposition, embryo freezing, oocyte (unfertilized egg) freezing, fertility-preserving surgery, protecting the ovaries from radiation therapy, ovarian suppression and ovarian tissue preservation. **Elective Oocyte Cryopreservation (Egg Freezing):** Egg freezing has come a long way. With this method, after around 2 weeks of ovarian stimulation, eggs are collected with an outpatient needle aspiration procedure (egg retrieval), similar to standard IVF procedures. Eggs are then frozen by a process called vitrification. Fertility and egg quality declines with age. As women age, their oocytes are less likely to be fertilized as healthy embryos and as a result, birth defects (chromosomal) and pregnancy failures increase, what is described as low egg quality. This happens because older eggs cannot repair DNA damage as well. This underscores the importance of conceiving at younger ages or preserving fertility if pregnancy will be delayed till later ages. **Ovarian Freezing:** With this technique, there is no need for ovarian stimulation. Typically, one ovary is harvested by an outpatient laparoscopic procedure which takes less than an hour. Because it is not practical to freeze ovary as a whole, the outer shell of the ovary which contains all the immature eggs is cut into slivers and frozen in test tubes. The freezing is performed using a Slow Freezing protocol with the utility of a programmable freezer. While the surgery is brief, the process in the lab can take up to 6 hours and is a meticulous process. The ovarian freezing procedure can be done in children as it does not require sexual maturity. In adults, ovarian freezing is often times needed when there is insufficient time for performing ovarian stimulation to freeze eggs or embryos. Another advantage of this procedure is that it can restore hormonal functions after ovarian transplantation. **Ovarian Tissue Transplantation:** When time has come to consider childbearing, ovarian tissue can be transplanted in two different ways, both developed by Dr. Kutluk Oktay. Dr. Oktay performed the world’s first pelvic ovarian transplantation procedure with previously cryopreserved tissue in 1999. With the first technique, ovarian slivers are thawed, and then they are reconstructed under a microscope, attached to a biodegradable scaffold and transplanted to pelvic side wall or the remaining ovary with a laparoscopic procedure. The transplant is similar to skin grafting, in that it reconnects to surrounding blood vessels on its own over the next 2-10 days. During that process, more than 50% of eggs maybe lost and that is why transplanted ovary does not last as long as the natural ovary. The second technique, also developed by Dr. Oktay, is transplantation under the skin (heterotopic transplantation), either in the forearm or abdomen area. This technique may be chosen when pelvis is not suitable because of prior pelvic radiation or scarring or when there is a need to closely monitor the graft (if there is any higher risk of ovarian cancer as in the case of BRCA-mutation carriers). **Fertility-sparing surgery** may be safe in early ovarian cancer of certain histological types, ovarian tumors of low malignant potential, malignant ovarian germ cell tumors and ovarian sex cord stromal tumors even in the case of advanced germ cell disease, if the contra-lateral ovary is normal. Concept of fertility-preserving surgery in early cervical cancer is conization or cervical amputation for stage IA1 or IA2 disease, or radical trachelectomy with stage IA2 or IB disease. Fertility preservation treatments must be tailored to the individual circumstances and integrated with the treatment regimen. Close coordination between the treating physician and the reproductive endocrinologist is the key to preserving family-building options for your patients.

CHANGING PARADIGM FOR SUCCESS IN ART FROM PR IN FRESH CYCLE TOWARDS CUMULATIVE PR. 8% INCREASE OF CUMULATIVE PR WITH EVERY ADDITIONAL EGG BY OPTIMIZING FLUSHING TECHNIQUE

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The trigger for this paper is a publication, published in Fert. Ster. Febr. 2017 (1) with main message, that we can increase our Cumulative Pregnancy Rate (Fresh plus Kryo Cycle) in IVF by 8% with every additional egg, which we harvest. There is no doubt, that Egg Collection is a crucial step in IVF. Unfortunately, we have no guide lines for this important procedure. Approx. 20% of IVF Centers worldwide are using Double Lumen Needles for OPU. 80 % Single Lumen Needles. The argument, not to flush follicles is frequently: “I do not believe in flushing, because the number of eggs are the same as with flushing, therefore flushing would be waste of time”. The reason for this phenomenon is not flushing per, but insufficient physical properties of a DL Needles on the market. The answer for this question has Poiseuille`s law. As soon as we increase the inner diameter of a needle out of 19%, the aspirated volume is doubled. In a DL Needle, the flow volume would decrease more than 50% together with remarkably reduced turbulences during both, aspiration and flushing as well due to narrowed inner lumen. The physical properties of STEINER-TAN Needle in 17, 19, 21gauge for flushing is the solution how to prevent disadvantages of a DL Needle. (2). It is a SL Needle flushed from outside needle, flushing starting 7cm proximal

of needle tip. For the first time it is possible to study in Egg Collection each follicle separately. Schenk et al.(3) All studies in the past, comparing flushing vs. non flushing, had ignored the dead space of at least 1300mm (Needle plus tubing). Conclusion: The new Paradigm with definition of success rate in IVF as Cumulative Pregnancy Rate together with an appropriate Egg Collection Technique, that means flushing follicles with the right needle, based on Law of Physics will be the future in ART. Our patients have the right, that we retrieve as much eggs/ follicle as possible and we physicians have to accept the compromise, that duration of OPU procedure will take us a few minutes longer.

Ref.
(1) Vaughan D,A, Fert. Ster. February 2017Volume 107, Issue 2, Pages 397–404.e3
How many oocytes are optimal to achieve multiple live births with one stimulation cycle? The one-and-done approach
(2) Steiner H.P. Textbook of Minimal Stimulation IVF Chapter 16 – Milder, Mildest or Back to Nature. Chapter 16 Optimizing Technique in Follicular Aspiration and Flushing
Gautam N Allahbadia, Alejandro Chávez-Badiola (Eds)
Jaypee Brothers Medical Publishers (P) Ltd, New Delhi First Edition: 2011
(3) Schenk et al. Biobanking of different body fluids within the frame of IVF—a standard operating procedure to improve reproductive biology research J Assist Reprod Genet. 2017 Feb; 34(2): 283–290.
Disclosure: Hans-Peter Steiner CEO of IVFETFLEX.COM is inventor and manufacturer of most devices mentioned in this lecture.

WOMEN'S INTENTIONS TO USE FERTILITY PRESERVATION TO PREVENT AGE-RELATED FERTILITY DECLINE

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Problem statement: The optimal age to cryopreserve oocytes for later use is before 36 years. Current users are on average 38 years old. In this cross-sectional study, an online survey was constructed about the factors associated with the intentions of childless women aged 28-35 years to use fertility preservation (FP). **Methods:** Questions were derived from the Theory of Planned Behaviour (attitudes and subjective norms regarding FP and perceived behaviour control to do FP) and the Health Belief Model (perceived susceptibility of infertility, perceived severity of childlessness, barriers and benefits of FP and cue to use FP). Also addressed were parenthood goals, fertility knowledge and intentions to use FP within 2 years. The data were analysed using structural equation modelling. **Results:** The Health Belief Model showed a good fit to the data ($\chi(2)$ [14, n = 257] = 13.63, P = 0.477; CFI = 1.000: RMSEA = 00, 90% CI [0.00-0.06]). **Conclusion:** Higher intentions to use FP were associated with feeling susceptible to infertility, considering FP useful to achieve parenthood, perceiving the implications of infertility as severe, expecting to have children at a later age and having fewer ethical concerns. This suggests an increase of fertility awareness is necessary for the optimal use of FP.

PREECLAMPSIA AS A CARDIOVASCULAR DISORDER

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Defective placentation is associated with persistence of a high-resistance uterine circulation, impaired placental perfusion and a placental 'stress' response leading to the development of preeclampsia. According to this theory, the maternal syndrome of preeclampsia constitutes the end-stage of a pathogenic cascade beginning earlier in pregnancy with the initial insult - a failure in trophoblast invasion. It has been proposed that placental dysfunction disorders such as early-onset preeclampsia comprise a disease entity, which is distinct from late-onset preeclampsia. The latter has been attributed as "maternal" preeclampsia, while the first has been dubbed as "placental" preeclampsia – a rather simplistic dichotomy. There are inconsistencies with the placental origins hypothesis, especially when considering the lack of a causative association with abnormal placental histology or lack of impaired fetal growth in the majority of cases (a TED Talk on this topic can be accessed here: http://bit.ly/2i1SqDk). An alternative explanation is that placental dysfunction is secondary to maternal cardiovascular maladaptation in pregnancy. After all, the primary derangement in preeclampsia involves the cardiovascular system due to the widespread and profound effects on the heart and endothelial system. The concept that placental dysfunction is secondary to a maternal disorder is not new when one considers the clinical similarities between preeclampsia and gestational diabetes - both pregnancy-specific conditions that are cured by birth (Table 1). It is accepted that gestational diabetes develops when the maternal pancreas is unable to manage the increasing glucose load of pregnancy. Emerging evidence demonstrates that pregnancy presents a substantial cardiovascular load on the maternal heart, and that cardiovascular dysfunction precedes the disorder, predominates in the clinical syndrome and persists for several decades postpartum. Placental dysfunction is fundamental to the pathophysiology of pregnancy complications such as preeclampsia, but to date, the placenta has been considered in isolation without regard to the fact that it's functioning is dependent on adequate perfusion by the maternal circulation.

REFERENCES:

1. Thilaganathan B. Placental syndromes: Getting to the heart of the matter. Ultrasound Obstet Gynecol 2017;49:7–9.
2. Melchiorre K, Sharma R, Khalil A, Thilaganathan B. Maternal Cardiovascular Function in Normal Pregnancy: Evidence of Maladaptation to Chronic Volume Overload. Hypertension. 2016;67:754-62.
3. Verlohren S, Perschel F, Thilaganathan B, Dröge LA, Henrich W, Busjahn A, Khalil A. Angiogenic markers and cardiovascular indices in the prediction of hypertensive disorders of pregnancy. Hypertension 2017;69:1192-1197.
4. Kalafat E, Thilaganathan B. Cardiovascular origins of preeclampsia. Curr Opin Obstet Gynecol. 2017. doi: 10.1097/GCO.0000000000000419.
5. Behrens I, Basit S, Melbye M, Lykke JA, Wohlfahrt J, Bundgaard H, Thilaganathan B, Boyd HA. Risk of post-pregnancy hypertension in women with a history of hypertensive disorders of pregnancy: nationwide cohort study. BMJ. 2017;358:j3078.

Table 1: Comparison of gestational diabetes and preeclampsia as pregnancy-induced disorders that are resolved by birth.

	Gestational Diabetes	Preeclampsia
Definition and diagnosis		
Maternal organ system	Endocrine	Cardiovascular
Definition	New onset hyperglycemia after 20wks	New onset hypertension after 20wks
Diagnosis	High glucose level	High blood pressure
Pre-pregnancy disease	Results in a more severe pregnancy phenotype	Results in a more severe pregnancy phenotype
Clinical characteristics		
Predisposing factors	Same as for diabetes	Same as for cardiac disease
Screening test	GTT (measure of pancreatic function)	Blood pressure (measure of cardiac function)
Screening performance	Improves with testing in later pregnancy	Improves with testing in later pregnancy
Organ function	Relative insulin insufficiency	Relative cardiovascular insufficiency
Disease amelioration	Reduce load (lower carbs)	Reduce load (lower BP)
Disease cure	Birth	Birth
Pregnancy outcome		
Fetal outcome (short term)	Macrosomia in severe/early GDM	SGA in severe/early PE
Infant outcome (long term)	Increased risk of obesity and early-onset diabetes	Increased risk of cardiovascular disease
Maternal short-term outcome	Most normoglycaemic Occasional hyperglycemia	Most normotensive Occasional hypertension
Maternal long-term outcome	50% risk of diabetes within 10 years	30% risk of hypertension within 10 years

VULVAR VESTIBULITIS SYNDROME: CONSERVATIVE MANAGEMENT OR SURGERY?

Paivi Tommola, Finland

Localized provoked vulvodynia (LPV) is a subset of vulvodynia, associated with induced pain by touch on vulvar mucosa in the absence of any other recognizable disease. Vestibulodynia represents the pain sensation in the vulvar vestibular mucosa, the area immediately surrounding the vaginal opening, and results in severe dyspareunia. The pain is provoked by only a light touch, a phenomenon defined as allodynia. LPV mostly affects young fertile-aged women. The peak incidence of 8-15% of the condition is among women at 20 to 30 years of age. Details of the LPV etiopathogenesis have still remained unknown. However, knowledge on particular risk factors and patient characteristics that associate with LPV has increased in recent years. Different vulvovaginal infections, especially recurrent candidiasis, are known risk factors for LPV. In vitro studies have further produced data of the significance of *Candida albicans* infection as a pain generator in vulvar vestibule. We demonstrated that vulvar vestibular mucosa has its own secondary lymphoid tissue, the vestibule-associated lymphoid tissue. Activation of VALT and its association with increased neuroproliferation in LPV suggest that immune activation plays an essential role in the altered pain sensation in LPV. Studies on different treatment options show that some patients, but not all, benefit from conservative management, such as physical therapy, cognitive behavioral therapy, or topical or systemic medical treatment. Biofeedback therapy to reduce hypertonicity and

restore normal voluntary relaxation of the muscles has been shown to effectively reduce intercourse pain in LPV. Combined programs utilizing varied physical therapy techniques and psychosexual counseling have proven effective. In addition to reducing pain, psychological interventions target skills to better cope with pain (pain self-efficacy) and to restore sexual functioning. Research evidence on the efficacy of most of the topical medications in LPV is weak. Sensitization of the peripheral nerves is a suspected mechanism for LPV pain, which rationalizes the use of topical anesthetics. Discontinuation of COCs has been shown to significantly alleviate or totally abolish the vestibular tenderness in 15 % of LPV patients. However, often the improvement by a single treatment option is not much greater than achieved by placebo. Because the pain mechanism of LPV is not yet fully understood, and because this condition has multiple associated factors, a multidisciplinary treatment approach with individualized steps is recommended. We have developed an algorithm that takes into account several of the suggested associated factors of LPV, e.g. pelvic floor hypertonicity, history of recurrent candidiasis, peripheral nerve proliferation, steroid receptor alterations of the mucosa, and psychosexual patient characteristics. All LPV patients at our clinic are managed according to this algorithm. In a comparative study, we did not find any difference in the long-term well-being of a group of patients with severe LPV, who were treated either by conservative options only or by a combination of conservative and surgical treatment. Dyspareunia decreased by around 70% in both treatment groups and 90% of the patients reported complete or partial response at long-term. This suggests that many patients benefit from algorithm-based multidisciplinary conservative management and that patient's refractory to this management benefit from posterior vestibulectomy. Thus, multidisciplinary conservative management should be initially offered to all LPV patients. Posterior vestibulectomy is rational, safe and effective in patients refractory to conservative treatment.

PREDICTING MOSAICISM IN AN EMBRYO
Nathan Treff, USA

Predicting mosaicism in an embryo from a single biopsy is challenging and requires careful consideration for artifacts introduced by inferior methods of testing. Still, evidence suggests that embryos with copy number patterns consistent with mosaicism may have reduced reproductive potential. Given carefully validated methods with low risk of false positives, mosaicism predictions may improve the selection of embryos in IVF. Mitochondrial DNA quantity within a trophectoderm biopsy has been proposed as a marker of embryonic reproductive potential. However, studies to date have failed to establish improved outcomes with prospective blinded analysis. Retrospective studies have also failed to acknowledge the limitations of using single embryo transfer outcomes to evaluate whether mitochondrial quantity is predictive of outcomes. When double embryo transfers with a singleton pregnancy are evaluated, mitochondria DNA quantity does not predict which embryo implants. Additional studies are necessary to determine whether mitochondrial DNA content can be used to improve embryo selection.

MITOCHONDRIAL DNA QUANTITATION
Nathan Treff, USA

Recent studies on the utility of mitochondrial DNA quantitation as a biomarker of reproductive potential are contradictory. Positive studies are limited by the use of single embryo transfers which may not control for patient or IVF center specific variables. Data also suggest that mtDNA quantities may simply reflect the developmental state of the embryo. Completion of ongoing clinical trials is needed in order to clarify whether mtDNA improves embryo selection prior to routine utilization.

CAN MATHEMATICAL MODELS HELP IMPROVE THE INFORMATION DERIVED FROM THE OGTT?
Andrea Tura, Italy

Mathematical methods are useful in the study of several aspects of glucose metabolism, based on the data derived by an OGTT. In principle, every mathematical equation could be considered a model. Possible more strict definition would consider as mathematical models those that rely on relevant physiological knowledge, whereas the other equations (typically, simpler) may be called "empirical" indices. In glucose metabolism, several methods exist for the quantification of specific aspects of physiological or clinical relevance, especially insulin sensitivity or resistance, insulin secretion and beta-cell function, as well as glycemic control and variability. These aspects of glucose metabolism are indeed extremely important for the study of diabetes (both type 2 and gestational diabetes), but even for the study of women with history of gestational diabetes, due to their known increased risk of type 2 diabetes at later time. For the study of each of the mentioned aspects of glucose metabolism, there are several possible methods available, some methods being empirical indices, and some others being more complex, physiologically-based models. Among all methods quantifying a specific aspect of glucose metabolism, significant relationships are often observed. As an example, with regard to insulin sensitivity, there are many methods available, typically showing nice relationship among them, and similar ability to disclose possible differences among the patients' groups under investigation. Similar considerations hold for the methods quantifying insulin secretion and beta-cell function, though the number of methods available is somehow lower than for insulin sensitivity. Given the fact that many methods often provide similar information, it may be hypothesized that those simpler and easy to compute should be preferred. This statement is however not correct, since the information provided by the different methods is not the same in each condition and contest. Typically, the more complex methods, i.e., the physiologically-based models, are able to disclose subtle metabolic defects that are not shown by the simpler empirical indices. As an example, related to gestational diabetes, one study compared after pregnancy the metabolic characteristics of women with history of gestational diabetes, but normal glucose tolerance at the time of the study (fGDM), to those of healthy control women, which had a normal pregnancy (CNT). Women had indeed very similar glycemic levels (4.54±0.05 vs. 4.55±0.06 mmol/L at fasting, and 5.01±0.17 vs. 5.03±0.17 mmol/L at 2h, in fGDM and CNT, respectively); however, an impairment in beta-cell function was discovered in fGDM (beta-cell glucose sensitivity was 108±14 vs. 165±22 pmol min^{-1} m^{-2} mM^{-1}, p=0.03). Of note, all empirical indices of beta-cell function failed to show significant differences between the two groups. We may conclude that empirical indices may be often adequate (and sometimes the only methods applicable based on the data available), but more refined methods in some cases are superior, since they may be able to disclose subtle differences among groups, which are not observed by the simpler methods. Thus, in our opinion refined methods should be certainly used, unless this is not feasible for limitations in the available data.

PROGRESSES IN VAGINAL MICROFLORA PHYSIOLOGY AND IMPLICATIONS FOR BACTERIAL VAGINOSIS AND CANDIDIASIS
Gary Ventolini, USA

In the last decade, there have been plentiful of scientific advances regarding the immunology and pathophysiology of human vaginal microbiota reported in the medical literature. As a result, we now have a more comprehensive understanding of the role that lactobacilli exert in the vaginal milieu and their interactions with vaginal mucosa. Also, a better knowledge of the pathophysiological mechanisms essential for vaginal defense against pathogenic bacteria and fungi. The pathogenesis of bacterial vaginosis is still under investigation and an animal model has not been identified yet, however, a recent publication in Scientific Reports by our group seems promising. BV presents several more challenges, among them are: the need to develop more effective treatments, to find ways to re-establish a healthy vaginal milieu after treatment and to tackle recurrences. Regarding fungal infections, preliminary genetic susceptibility association studies should be extended to larger multiethnic cohorts of patients with recurrent infection. Additionally, it is necessary to comprehend the intricate function that probiotics provide with regard to fungal infection prevention, treatment and recurrences. Certainly, a better understanding of the role that lactobacilli products (including lactic acid and hydrogen peroxide) exert in the vaginal milieu, could provide additional natural biological weapons on the fight against intrusive bacteria and fungi. Moreover, other lactobacilli secretions like bacteriocins and biofilm could be an alternative or a co-adjuvant to antibiotics, for preservation of a healthy vaginal milieu and to treat recurrent vaginal infections. All these important research challenges, when elucidated may finally lead to an enhanced understanding of recurrent bacterial vaginosis and recurrent fungal infections therefore, to propose more effective and innovative therapies. This presentation addresses those advances in vaginal microflora immunity and their implications for prevention, diagnosis and treatment of bacterial vaginosis and candidiasis especially for their recurrences. Lastly, we will briefly discuss the role that an unhealthy vaginal milieu plays in preterm labor.

VAGINAL LACTOBACILLUS: BIOFILM FORMATION IN VIVO – CLINICAL IMPLICATIONS
Gary Ventolini, USA

Albert S Döderlein a German physician described in 1892 vaginal bacteria present in healthy pregnant women and called it Döderlein it was later renamed Lactobacillus. Vaginal lactobacilli provide protection against intrusive pathogenic bacteria. Most vaginas from child bearing age women are mainly colonized by: *L. crispatus, L.*

iners, L. jensenii, and *L. gasseri*. This is not true across all racial, locations and ethnic groups. Healthier vaginas harbors mostly *L. crispatus* and *L. jensenii.* Lactobacilli produce: hydrogen peroxide, lactic acid, hydroxyl radicals, bacteriocins, organic acids, bio-surfactants and arginine deaminizes. Therefore, Lactobacilli sustain vaginal healthy micro-flora equilibrium and we better understand complexities and relations. Additionally, some Lactobacillus spp. produce in vitro a thick and protective biofilm. Biofilms are complex conglomerates of extracellular polymeric substances produced by bacteria that allowed them intertwined in it to thrive and to protect themselves. We reported in vivo formation of biofilm by vaginal *L jensenii*. The biofilm was captured in fresh wet-mount microscopic samples from asymptomatic patients after treatment for recurrent bacterial vaginitis. We will be presenting short movie clips demonstrating the Lactobacilli biofilm formation in vitro and in vivo, and discussing their significant clinical implications. Among which are the opportunity to isolate, grow, study and then, therapeutically utilize lactobacilli products and their biofilm for recurrent vaginal infections treatment, vaginal health promotion and preterm labor prevention.

PREDICTION AND DIAGNOSIS OF PREECLAMPSIA WITH THE SFLT-1/PLGF-RATIO
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The pathophysiology of preeclampsia, while not completely understood up to now, involves a dysfunctional placenta. It is not known what causes the primary placental lesion, however, it is now clear that the dysfunctional placenta excretes altered amounts of angiogenic and antiangiogenic factors. This increased expression of the soluble fms-like tyrosinkinase 1 (sFlt-1) and reduced expression of placental growth factor (PlGF) in women with preeclampsia is thought to be the connecting link between the initial placental lesion and the subsequent maternal syndrome of hypertension, proteinuria and generalized endothelial dysfunction. The altered amounts of sFlt-1 and PlGF can be measured in the circulating blood of the mothers. Automated tests have been developed and evaluated for the clinical routine. In a case control study it has been shown that the sFlt-1/PlGF-ratio is able to detect preeclampsia with a high diagnostic accuracy, when the cut-off of 85 is employed. This cut-off was also evaluated in a prospective study showing its high predictive accuracy to detect preeclampsia-related adverse events in women presenting with signs and symptoms of the disease. The PROGNOSIS study evaluated the ability of the sFlt-1/PlGF-ratio to rule out and rule in the disease in high risk women. The study showed that the cut-off of 38, which was derived and validated in PROGNOSIS, has a negative predictive value (NPV) of 99.3% in ruling out the disease for one week in women with signs and symptoms for preeclampsia. The same cut-off has a positive predictive value (PPV) of 36.7% for ruling in the disease for four weeks in high risk women between 24+0 – 36+6 weeks of gestation. The PPV at the cut-off of 38 to predict the onset of preeclampsia and / or preeclampsia-related adverse outcomes is 65.5%. The sFlt-1/PlGF-ratio is a reliable biomarker to better predict and diagnose the disease in women at high risk for preeclampsia or related adverse outcomes.

PRENATAL DIAGNOSIS OF CONGENITAL HEART DEFECTS
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Congenital heart defects (CHD) are among the most common congenital anomalies, with incidence 4-13 per 1000 newborns. CHD are considered the leading cause of neonatal death. Early prenatal diagnosis is considered essential because it allows early intervention. Fetal echocardiography as diagnostic procedure was introduced between 1970 and 1980. With the advancement of technology and interdisciplinary approach prenatal diagnosis of CHD by using fetal echocardiography has resulted in a decrease of the morbidity and mortality of these patients. Pregnant women with increased risk for giving birth to a child with CHD require more detailed evaluation of the fetal heart as well as those with high risk for aneuploidy based on the combined screening. Theoretically, most congenital heart defects can be diagnosed prenatally and a suspicion can be set already at the recommended routine evaluation of fetal anatomy in the second trimester, and with fast technological development of more sophisticated systems even in the first trimester. Prenatal diagnosis of congenital heart disease allows parents to receive information on the diagnosis, the further course of pregnancy and treatment possibilities before or after birth, making easier for them to make a decision whether to continue the pregnancy or to terminate it earlier. Clinic for Ob/Gyn of Clinical Center of Serbia is the leading referral center for fetal echocardiography in region, along with University Children`s Hospital in Belgrade were the prenatally diagnosed anomalies are treated. We analyzed 14500 fetal echocardiography exams in period 1991-2014 which were performed at both of clinics. The aim of our study was to analyze the influence of fetal echocardiography on pregnancy outcome after prenatal diagnosis of congenital heart defects. The average maternal age at time of diagnosis was 32 years. The mean gestational age at the time diagnosis was 25.9 weeks. The most common indication for echocardiography was suspicious abnormal cardiac findings in obstetrical screening sonography (50.6%). Among total of 9055 examined fetuses, pathological finding on the fetal heart was found in 638 cases. The most common congenital heart defects were structural anomalies of the fetal heart in 81%, of which 13.3% were HLHS and 11.2% VSD. Of all fetuses with diagnosed congenital heart defects, 295 (46.2%) were born alive and had good postnatal prognosis. In group of liveborn, the highest survival rate was observed in children with shunt defects (24%) and arrhythmias (33,5%). Fetal demise occurred in 17 (2.7%) of pregnancies. In early neonatal period died 68 (10.6%). Pregnancy was terminated in 40.4% cases with isolated severe congenital heart defects or in cases of concomitant fetal anomalies or chromosomal defects. Some sort of intervention was required in 110 cases (17,2%). Postnatal surgical correction of congenital heart disease underwent 75 (11,7%) neonates. Postoperatively died 9 (1,4%) neonates. Sensitivity of fetal echocardiography in our group was 95,92%, specificity 99,91%. Our study proves that fetal echocardiography is reliable, informative diagnostic tool in detecting congenital heart defects with high specificity and sensitivity. Fetal echocardiography had high influence on pregnancy outcome in our study given the fact that Serbia is still country in transition with limited options for congenital heart defects treatment. Despite relatively high percentage of terminated pregnancies in cases with poor prognosis, good outcome was achieved in cases with correctible fetal heart defects. With multidisciplinary approach, given the fact that Serbia is still country in transition with limited options for congenital heart defects treatment, it provides optimal time window for improving perinatal outcome.

THE 'FREEZE ALL' CONCEPT IN ASSISTED REPRODUCTION: AN OPTION FOR EVERYONE?
Andrea Weghofer, Austria

Assisted reproduction was originally deemed as controlled ovarian hyperstimulation in combination with the subsequent transfer of one or more well-developed embryo(s) some days after oocyte retrieval, while the remaining embryos were discarded. Advances in cryopreservation techniques have facilitated storage of surplus oocytes and embryos for future use, though frozen embryo transfer (FET) cycles were associated with impaired pregnancy potential when compared to a fresh transfer. Yet, FET success rates steadily increased and finally approached those of fresh transfer cycles. These developments led to the adoption of a freeze all policy in women with ovarian hyperstimulation syndrome (OHSS). Recently, promising pregnancy and live-birth rates following frozen-thaw transfers in high responders raised the assumption that the disjunction of ovarian hyperstimulation and embryo transfer might overcome potential negative effects of gonadotropin usage on endometrial receptivity. This led proponents advocate in favour of an elective ‚freeze all' policy for all women undergoing assisted reproduction., while opponents claim impaired success rates due to embryo wastage. This lecture aims to give a scientifically-based overview on the pro and cons of a ‚freeze all' strategy for different patient populations.

DIAGNOSIS AND TREATMENT OF TWIN-TO-TWIN TRANSFUSION SYNDROME
Christof Worda, Austria

Multiple pregnancies comprise an increasing proportion of the total pregnancies in the developed world due to older maternal age at childbirth and the expanded use of fertility treatments. Twins are at higher risk of complications than singletons. Twin pregnancies can be classified as dichorionic or monochorionic. Thirty percent of all twin pregnancies are monochorionic (MC), and chorionicity is an important determinant of adverse outcome. Twin-twin transfusion syndrome (TTTS) is one of the most serious complication of MC placentation, occurring in 10-15% of MC pregnancies and accounting for 15 percent of overall perinatal mortality in twins. The basis for the clinical pathology is the presence of blood vessels anastomoses in the placenta connecting the circulations of mc twins. Typically, one twin who has decreased amniotic fluid, and the other twin who has excess amniotic fluid (the recipient twin). The donor twin, who is relatively underperfused, usually exhibits oliguria, and is often anemic and hypoproteinemic. The recipient twin, who is relatively hyperperfused and hyperproteinemic, produces atrial and brain natriuretic peptides to counteract its excessive intravascular volume. In addition, the recipient twin's heart may develop progressive biventricular hypertrophy with predominantly right ventricular systolic and biventricular diastolic dysfunction; tricuspid regurgitation followed by cardiac failure ultimately occurs. The syndrome is defined sonographically by the presence of a polyhydramnios in the sac of one

twin (recipient) and oligohydramnios in the sac of the other twin (donor). Reduction of intrauterine pressure appears to reduce the risk of spontaneous rupture of the membranes and preterm labor, thereby prolonging pregnancy. In addition, amnioreduction appears to improve placental perfusion, which may even the flow through vascular anastomoses and reduces the rate of fluid reaccumulation. However, the procedure does not correct the vascular imbalance that is the basis of TTTS; therefore, fetal ischemic injury in the event of a single fetal demise or ongoing fetal hemodynamic instability remains a risk. Laser coagulation is the treatment of choice of TTTS because it has been shown that it results in higher survival rates and better neurologic outcomes. With this technique experienced centers achieve in 60% of cases double survival, in 30% single survival and in 10% no survival of the twins.

FERTILITY SPARING MANAGEMENT OF OVARIAN CANCER AND BORDERLINE TUMORS

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Women in childbearing age might be affected by gynaecological cancers, most of these malignancies are age-influenced cancers such as ovarian cancers. This particularity together with an elder age at the first pregnancy, make fertility sparing management of gynaecological cancer an increasing situation that needs to be balanced and managed appropriately by the gynaecologic oncologist in agreement with the woman. Ovarian cancer is an entity usually presented in advanced stages, more than 70% of them will be diagnosed at FIGO stage III-IV. Additionally, the mean age of presentation is 60-70 years old, which makes early stage ovarian cancer in young women a very rare disease. On the other hand, borderline ovarian tumors are usually diagnosed in younger women and early stages. The safety of uterine and ovarian preservation in borderline ovarian tumors is clear nowadays. There is enough evidence to preserve uterus and the contralateral ovary in case of unilateral tumors. Oophorectomy is recommended compared to cystectomy, since it decreases dramatically the relapse rate observed among these patients; however, in bilateral cases cystectomy could be considered. In advanced stage borderline ovarian tumors, fertility preservation could have a potential role due to the moderate good prognosis of the disease. Regarding invasive epitelial ovarian cancer, only selected cases are appropriate to be managed by fertility preservation options but always in early stages of the disease. The current staging procedures for FIGO stage I-II include total hysterectomy, bilateral salpingo-ophorectomy, total omentectomy, pelvic and para-aortic lymphadenectomy, and in some cases appendectomy, cytology or peritoneal biopsies. To preserve fertility in such cases all procedures need to be included but total hysterectomy and bilateral salpingo-ophorectomy. However, the current evidence based medicine supports this preservative treatment only in FIGO stage IA with histological grade 1 or 2. Ovarian or uterine preservation on the rest of tumoral stages and grade 3 tumors need to be considered experimental since recurrence rate could increase up to 60% with a clear decrease in the survival rates of the patients. The route of approach to the disease can be either laparotomy or laparoscopy/robotic-assisted depending on the tumoral size and surgeons´ experience. Endoscopy offers a very useful approach to evaluate the abdominal cavity, and in-bag extraction avoids tumoral spillage; however, laparotomy according to some authors, could decrease the tumoral rupture up to 70% of cases. Probably the main factor influencing the suitability of each route of surgery could be the surgeon´s experience in the technique used. Preserving fertility treatment in ovarian tumors is a very uncommon approach that need to be discussed and balanced with the patient and ideally discussed in a multidisciplinary committee to choose always the most tailored solution to every single patient. To sum up, fertility sparing surgery is an oncologically safe option for a very selected group of young patients with ovarian cancer or borderline ovarian tumors diagnosed during their childbearing age.

A NOVEL HPV DETECTION METHOD

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Cervical cancer, attributed to Human Papilloma Virus (HPV) infection, is one of the most prevalent cancer affecting women all over the world. Early HPV screening and prevention of precancerous is known to be highly effective in drop of mortality rate of cervical cancer. **IsoHPV**, a novel HPV detection method, is an extremely powerful high-risk HPV detection products, which based on proprietary **isothermal amplification technologies** to be the best fit for early HPV screening to prevent cervical cancer. We have compared IsoHPV with Roche Co-bas HPV that is currently used for HPV screening worldwide. IsoHPV can detects all 15-high risk HPV in a single-tube format while simultaneously genotyping HPV 16 and HPV 18; it is **significantly faster** (1.5 hours vs 4-6 hours). IsoHPV has minimum requirement for the equipment (just incubation), can **tolerate complex sample specimens** (such as bloody sample), and no need for DNA extraction; it is **very simple** to set up (requires only **one pipetting step**). IsoHPV has **great specificity with the sensitivity** to detect single copy of HPV. IsoHPV has granted **CE certification** in Europe and got an approval from Chinese FDA.

O01-1518
CASE REPORT: POSTPARTUM SYMPHYSIOLYSIS, PERIURETHRAL LACERATION, AND PERINEAL RUPTURE AFTER VAGINAL DELIVERY WITH SHOULDER DYSTOCIA

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Problem statement: Shoulder dystocia is an emergency obstetrical condition which can cause serious consequences for both mother and fetus. The impacted shoulders should be released immediately by applying several maneuvers. Inappropriate practice of the maneuver may lead to dangerous complications such as symphysiolysis and laceration of birth canal. **Methods**: We report a case of symphysiolysis with left periurethral laceration and second grade perineal rupture after spontaneous labor in 26 years old P2A0 with shoulder dystocia. **Results:** On September 2nd, 2017, a 26-year old P2A0 with history of vaginal delivery 12 hours earlier, presented in the emergency department of Cipto Mangunkusumo National Hospital Jakarta, complaining of severe pain in pelvic area radiating to bilateral knees followed by restriction of movement involving both legs. The patient was first brought to midwives to deliver but the labour was complicated by shoulder dystocia. McRoberts maneuver was then performed by the midwives followed by applying pressure on all abdominal regions. Following the maneuvers, a 3,500-gram male baby was born. The midwives admitted that placenta was delivered completely, the uterus was well contracted however a vaginal laceration with active bleeding was seen. Soon after the delivery, the patient could not move her hips and legs due to severe pain. The patient then reffered to Cipto Mangunkusumo National Hospital for further examination and treatment. Further obstetrical examination revealed a second-grade perineal rupture, approximately 4 cm on posterior vaginal mucosa proximally without active bleeding. Another laceration was seen on 1-2 o'clock position on the left periurethral area of anterior vaginal wall, approximately 3.5 cm length. No active bleeding was seen. On vaginal examination, the urethra was intact and no fistule was found. The left medial side of pubic symphysis was palpated 6.0 cm away from the right medial side. Plain radiograph of pelvic showed 5.8 cm pubic diastasis and a sacroiliac joint dislocation. On September 3rd, 2017, the patient was consulted to Department of Orthopedics and was treated conservatively. A pelvic binder was applied to correct the symphysiolysis. A laceration repair was performed on the left periurethral area of anterior vaginal mucosa and the left labia minora, continued by perineorrhaphy. Folley catheter no.24 was inserted into uterine cavity for the lochia drainage. Post-operatively, plain radiograph of pelvic showed a shortening of pubic diastasis to 1.8 cm. The patient was immobilized for three days. The day after, she was allowed to stand up and walk but sitting position was prohibited. The patient was then discharged at the fourth day. **Conclusion:** Improper maneuver performed in shoulder dystocia may lead to harmful obstetrical complications such as symphysiolysis and laceration of birth canal. Surgical interventions could correct the complications however appropriate maneuvers are way more important to prevent such case. Therefore, it is necessary that all healthcare providers should understand the suitable interventions to perform when facing a shoulder dystocia.

O02-1257
ATTITUDES AND RELATED FACTORS ABOUT FAMILY PLANNING METHODS OF REFUGEE WOMEN IN TURKEY

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Problem statement: A part of basic health services, family planning services with positive effects on increasing women's fertility and performing healthy wanted pregnancy and deliveries should be available for all individuals, including refugee women. The present study was performed to determine Syrian refugee women's use and information level of family planning, attitudes towards family planning and related factors. **Methods:** The study was planned as a descriptive and cross-sectional study and included 555 voluntary Syrian refugee women. The data were collected between December 2016 and July 2017 at a maternity and children hospital in Konya, Turkey. A questionnaire investigating refugee women's socio-demographic and obstetric features and the Family Planning Attitude Scale (FPAS) were used in the study. For statistical analyses, the Kolmogorov-Smirnov, for descriptive statistical analyses, the Mann-Whitney U, the Kruskal-Wallis H and the Spearman's correlation analysis tests were used. **Results:** Mean age of Syrian refugee women was 25.67±7.32, their partners' mean age was 31.70±16.79, and mean time spent in Turkey was 20 months. The numbers of previous pregnancies and living children of refugee women were 2.80±1.84 and 2.37±1.69, respectively. The number of pregnancies/deliveries after coming to Turkey was found as 1.10±1.05. The ideal number of having children was detected as four in refugee women's opinion. Although 59% of women wished to have infants again, 46.7% were found to utilize any type of family planning. While refugee women chose condom as the most commonly used type of family planning, other types of family planning ranked as intrauterine device, oral contraceptive pills, coitus interruptus and combined injection contraceptive. Of partners, while 60% adopted no types of family planning methods, 49.5% in Syria and 37.5% in Turkey were determined to have family planning training. Only 39.5 of refugee women were found to wish to have family planning training. The mean FPAS score of refugee woman was 94.67±17.48. A significant association was detected between the average FPAS scores, and refugee women and partners' educational status, perception of income level, existence of social security, use of family planning methods, partners' support of family planning and having training of family planning in Syria (p0.05). While a statistically significant, positive and weak correlation was detected between the mean FPAS score and the number of pregnancies/deliveries in Turkey, there was a statistically significant, negative but also weak correlation between the mean FPAS score and ideal number of having children in refugee women's opinion (p0.05). **Conclusions:** Based on our study findings, refugee women and partners should be informed on family planning, and the attitudes towards family planning and related factors should be investigated through further studies. **Key Words:** Attitude, family planning, refugee, Syrian, women.

O03-1370
MEDICATION THERAPY FOR UTERINE FIBROIDS: AN ALTERNATIVE TO SURGERY

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Uterine fibroid is the most commonly seen benign tumor in women throughout the world. In 30 – 35% of women uterine fibroid is diagnosed at reproductive age; in 30% of cases the condition is accompanied by uterine hemorrhage, anemia, pelvic pain and infertility. The development and growth of fibroids is stimulated by progesterone, which promotes mitosis, as well as neoangiogenesis, invasion, chronic inflammation, and an imbalance between cellular proliferation and apoptosis. Therefore, there is a need to develop new therapies that could not only curb the growth of fibroids but also cure the patients of this condition. **Objective**: To determine the effectiveness of organ-sparing combination treatment for uterine fibroids in women of reproductive age using ulipristal acetate and target medications. **Materials and method:** 35 women with uterine fibroids aged 27 – 35 were investigated using clinical, instrumental methods, and laboratory testing. The patients were divided into two groups, per the treatment method. Group I included patients receiving background therapy with ulipristal acetate, a selective progesterone receptor modulator, at a dose of 5 mg a day. In addition to this, 13 patients in group II received indole-3-carbinol (Indinol®) and epigallocatechin-3-gallate (Epigallate®), at a dose of 2 capsules twice a day. These medications have a multitarget antiproliferative therapeutic effect. In both groups therapy started on day 2 – 3 of the patients' period and lasted for 6 months. **Results**: Patients in the comparison group had a diagnosis of fibroids of intramural (68.6%) and subserous (31.4%) localization. In all women, the number of uterine fibroids varied from 2 to 4, with a mean of 2.9. Ultrasound examination with color Doppler imaging showed that in group I, the mean diameter of fibroids was 2.97 ± 0.6 cm; in group II the mean diameter was 2.86 ± 0.7 cm. Upon completion of treatment the uterus shrank by 22.7% on average in group I, and in group II – by 37.7% ($p < 0.05$). Because of treatment, the diameter of fibroids decreased by 22.5% in group I, and by 34.2% in group II ($p < 0.05$). After 6 months of treatment the largest fibroid shrank by 36 and 42% in group I and II, correspondingly. Thinning of uterine walls was noted in 58.3 and 84.6% of patients of group I and II, correspondingly ($p < 0.05$). Patients of group II showed a 75% decrease in the episodes of headache, mastodynia, flushes; in group, I this decrease was 50%. We also detected a weight loss of 6.1 ± 1.5 kg in patients of group II, which was considered as a positive effect of treatment. Patients of group I did not show this effect. Amenorrhea set in after 5 – 7 days of therapy. **Conclusion:** Combination treatment of patients with ulipristal acetate, Indinol® and Epigallate® determines the target approach to treatment

of uterine fibroids by blocking sex hormone receptors and producing a powerful antiproliferative effect. This combination of medications improves the clinical effect, reduces undesirable effects of therapy thus making the method worthy of attention when dealing with uterine fibroids.

O04-1368
THE ROLE OF CELL PROLIFERATION IN THE INVASION PROCESS OF ENDOMETRIOMA IN CHICK CHORIOALLANTOIC MEMBRANE: A PRELIMINARY STUDY

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Problem Statement: The invasion of endometrial tissue outside the uterine cavity appears to be critical for the early development of endometriosis. The proliferation of endometriotic cell along the invasion process is not well understood. The Chick Chorioallantoic Membrane (CAM) has long been used to study metastatic tissue growth due to the chick`s immunocompetent system being not fully developed, therefore incapable of rejecting the implanted tissue sample. In this study, we evaluated the capability of endometrioma tissue in invading the CAM and the role of cell proliferation in the invasion process in relation to tissue growth promotion. **Methods**: Sixteen endometrioma samples were collected by laparoscopy from 9 patients diagnosed with endometrioma. The CAM was taken from fertilized eggs which had been incubated for 5 days. Window was made on the top of the egg shell in day 6. Samples of endometrioma was cut into fragments of 3-4 mm3 and were grafted onto CAM in colonies consisting of 3 sample fragments each. After 5 days of incubation, the CAM was excised circularly around the implanted tissue. All samples were then fixated using formalin, embedded in paraffin blocks, and were subsequently immunostained to evaluate the expression of proliferation marker Ki67. The evaluation of the samples focuses on the number of cell express Ki67, the location of Ki67 expression in endometrioma tissue, and the degree of implanted tissue invasion in the CAM. **Results**: We observed that there were 3 types of tissue invasion in the CAM: 6 samples (37,5%) fully invaded the CAM, 8 samples (50%) partially invaded the CAM, and 2 samples (12,5%) had not invaded the CAM yet but were in close contact to the CAM. In samples that fully invaded the CAM, the mean percentage of proliferation was 3±0,04 and the pattern of expression was scattered irregularly. Whereas in the samples that had partially invaded the CAM and samples that had only begun the implantation process, the expression of proliferation dominated in areas that encountered the CAM, with the mean percentage of proliferation being 5±0,05 and 0,5±0,01 respectively. **Conclusion**: In this study, we have proven that endometrial tissue has the capability to invade into deeper layer. The mean proliferation rate in the fully invaded group is higher than the partially invaded group and the group that had only begun the implantation process, but the results are not statistically significant. During the invasion process, cell proliferation is needed in areas where the tissue meets the CAM, specifically at the borders of tissue and the CAM, however once the tissue has fully invaded the CAM, cell proliferation occurs evenly in all areas thus expanding the tissue. This is an ongoing research thus addition towards the sample size is still possible.

O05-1285
MIFEPRISTONE AS A METHOD OF CHOICE FOR CERVICAL RIPENING IN COMPARISON WITH FOLEY'S CATHETER AND LAMINARIA STICKS

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Problem statement: Cervical ripening influences the outcome of induction of labor(IOL) before its spontaneous onset for delivery of the fetus. Mifepristone as a steroidal antiprogestogen which acts as a competitive progesterone receptor antagonist is more known as a medical method for first and second trimester abortion (clinical practice handbook of the World Health Organization, 2014). But medical abortion regimens contain information about effects of mifepristone on cervical ripening, cervical softening and dilatation, increasing in the sensitivity of the myometrium to the contractile effects of prostaglandine. The purpose of this study is to further compare the efficacy of mifepristone, Laminaria sticks and Foley's catheter and show that mifepristone can be used for pre-induction cervical ripening. **Methods:** This is a retrospective study of cervical ripening progress among of 173 women from 1/01/2015 to 1/07/2017 at the Research Institute of Obstetrics, Gynecology and Reproductology named after D.O.OTT, Saint-Petersburg, Russia. The inclusion criteria were the full-term period of gestation, a singleton pregnancy, vertex presentation, intact fetal membranes, vaginal cleanliness I-II grade (for Foley's catheter and Laminaria sticks). The exclusion criteria were a multiple pregnancy, the breech presentation, uterine scar, past Caesarean sections, preterm period of gestation, high stage of pre-eclampsy, decompensated stage of extragenital pathology. **Results:** The women were randomized into three groups: first group (n=60) for Foley's catheter insertion, second group (n=58) for Laminaria sticks, third group (n=55) for oral Tab.Mifepristone. In 1 group, the volume of using Foley's catheter was between 50 ml to 80 ml, in 2 group we used 3-9 Laminaria sticks, in 3group women received Tab.Mifepristone 200 mg orally twice with 24h interval. We divided 3 groups into two subgroups each (Bishop score Less proportion of using method with initially unfavorable cervix for pre-induction (BS6) was achieved in Mifepristone group compared to Foley's catheter group (62,3%, 85,0%; p0,05) and Laminaria sticks group (62,3%, 93,1%;p0,001). Women in 3group had a higher proportion of cervical favorability compared to 2group (81,1%,46,3%; p0,001) after control measurement but the dynamics of cervical ripening was statistically significant. Higher proportion of spontaneous onset of labor(SOL) in first 72h was achieved in Mifepristone group compared to Laminaria sticks group (86,5%, 62,9%; p 0,05). Women in 3group had a higher proportion of inducing labor compared to 1group (37,3%, 10,8%). This difference was statistically significant (p0,01). There was significant difference between Mifepristone and Laminaria sticks groups with unproductive preparation of cervix (24,3%,59,3%; p 0,01). Induction-delivery time, duration of labor and frequency of C-section had no statistically significant as a no difference in Apgar scores. **Conclusion:** All methods have a great influence on cervical ripening and show a good dynamic of this process. Mifepristone provides a greater success rate of cervical favorability and can be more accepted among women with vaginal cleanliness more than II grade.

O06-1374
ASSESSMENT OF OVARIAN RESERVE TESTS FOR PREDICTION OF OOCYTE YIELD AND CHANCE OF PREGNANCY AFTER OVULATION INDUCTION

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Introduction: Ovarian reserve plays a crucial role in achieving pregnancy following any treatment in sub fertile women. Assessment of ovarian reserve is essential for prediction the ovarian response and outcome of In Vitro Fertilization. Traditionally the age, basal follicle stimulating hormone (FSH), and estradiol (E2) levels were used for evaluation of ovarian reserve. Though ovarian reserve declines with age, it varies between individuals. Recent studies indicate that anti-mullerian hormone (AMH) and antral follicle count (AFC) are the two tests of ovarian reserve that are very useful in predicting ovarian response to controlled ovarian stimulation. However, there are controversial opinions about advantages of the various ovarian reserve tests for prediction of IVF outcome.
The aim of this study was assessment of most widely used ovarian reserve tests: age, follicle stimulating hormone (FSH), antral follicle count (AFC), anti-Mullerian hormone (AMH) and determination of the most reliable markers of ovarian reserve for prediction the outcome of ovulation induction in terms of oocyte yield and chance of pregnancy. **Methods:** The prospective study included 111 infertile women, who underwent IVF with or without ICSI. Patients with an oocyte count ≤3 were considered as poor responders (n=48); those with 3 were considered as good responders (n=68). AFC, levels of FSH and AMH were determined on day 3 of menstrual cycle. **Results:** The results of the whole study show that, the correlation between AMH and number of oocytes was the strongest (rs=0.6), as well as between AFC and number of oocytes (rs=0.6). There were statistically significant differences between two groups in all parameters. Poor responders were older, having higher FSH concentrations, lower AMH and AFC values and significantly lower number of retrieved oocytes and embryos compared with good responders (p0.05). Comparison between those with ongoing pregnancy (n=32) and those without (n=68) revealed that there were significant differences in age (p=0.000), AMH (p = 0.004) and AFC (p=0.006), as well as in number of retrieved oocytes (p=0.004) and number of embryos (p=0.002).

Women with ongoing pregnancy were younger, had higher values of AMH, AFC, oocytes and embryos number. No significant differences were observed in concentrations of FSH (p=0.115). The binary logistic regression analysis for clinical ongoing pregnancy shows, that age is the only factor, which significantly predicted the likelihood of clinical ongoing pregnancy (B=0.14; p=0.005). The cut-off value of the age for prediction of the clinical pregnancy was 33.5 y (ROC_{AUC}=0.733; sensitivity 79%, specificity 50%). Binary Regression Analysis for Poor Ovarian Response shows, that AFC is the only factor which significantly predicts poor response after ovulation induction. The cut-off value of AFC for prediction of poor response was 5 (ROC_{AUC}=0.816; sensitivity 90%, specificity 65%). **Conclusion:** AMH and AFC have the same values for prediction of oocyte and embryo number after ovulation induction. The levels of FSH have no predictive value for embryo number and chance of pregnancy during IVF. AFC is the most reliable predictor of poor ovarian response after ovulation induction during IVF. Among ovarian reserve tests Age is the only factor which significantly predicts the likelihood of cumulative ongoing pregnancy during IVF.

O07-1343
POLYMORPHISM OF IL-1B, TNF-A, IL-1RA, IL-4 CYTOKINE GENES IN PATHOGENESES OF PRETERM DELIVERY

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Problem statement: Preterm birth is a worldwide significant clinical and public health problem. We know how to diagnose preterm delivery, how to try and to stop spontaneous preterm uterine contractions, but we don't exactly understand why it happens. **Methods:** 108 women with threatened preterm labor were examined. Later 66 women had spontaneous preterm birth and 42 were delivered at term. The polymorphic variants of IL-1β + 3953C → T (rs1143634), TNF-α G → A (rs1800629), IL-1RN (VNTR) and IL-4 (VNTR intron 3) genes were determined by polymerase chain reaction (PCR). **Result(s):** T allele of IL-1β +3953C cytokine gene was 7.6 times more common in women with preterm birth (36.4% and 4.8%; RR = 1.802; 95% CI = 1.420−2.288; p0.05). TT genotype has only women with preterm birth up to 26 weeks (p 0.01). CT genotype was detected in 27.3% of women with preterm birth (27-32 weeks) and only in 4.8% of women with delivery at term (p 0.01; RR = 1.65; 95% CI = 1.298−2.098). Genotype AA of TNF-α G → A gene was not found. The genotype GA was identified 3.8 times more often in women with preterm birth (18.2% and 4.8%; p 0.05; RR = 1.492; 95% CI = 1.133−1.966) and preterm birth were at 26-30 weeks. 2R\2R genotype of IL-1RA has only women with preterm birth before 26 weeks (p 0.05; RR = 1.714; 95% CI = 1.445−2.0). The genotype 2R/4R was also often detected in women with preterm birth: 54.5% and 42.9%, respectively (p 0.05). The allele 2R of IL-4 anti-inflammatory cytokine gene was 2 times less common in women with preterm birth (36.4 % and 71.4%; p 0.01; RR = 0.571; 95% CI = 0.411−0.795). The combination of three pro-inflammatory alleles was detected in 9.1% of women (p 0.05; RR = 1.700; 95% CI = 1.445−2.000) and combination of four pro-inflammatory alleles in 18.2% of women (p 0.01; RR = 1.778; 95% CI = 1.490−2.121). Genotype GA of TNF-α gene was always combined with the presence of IL-1β, IL-1Ra and IL-4 pro-inflammatory cytokine genotypes. Delivery at 24-26 weeks was because of such genetic combinations. It is also shown that the genotype TT of IL-1β gene was always combined with pro-inflammatory cytokine genotype of IL-1Ra and IL-4. The delivery at 23-25 weeks was a result of these genetic combinations. Genotype CT of IL-1□ gene was combined with pro-inflammatory TNF-α and IL-1Ra genotypes in 66.7% of cases and all these women had early preterm birth. If the genotype CT of IL-1β gene was detected alone, such women had preterm birth in the term of 32−33 weeks. **Conclusions:** The pro-inflammatory T allele of IL-1β cytokine gene and IL-1Ra gene can be considered as a risk factor for preterm birth. The combination of pro-inflammatory genotypes of some cytokines is also a negative factor for the prolonging of pregnancy and can increase production of several cytokines.

O08-1582
ACCURACY OF PELVIC ULTRASOUND IN PREOPERATIVE EVALUATION OF UTERINE MYOMAS: A PROSPECTIVE COHORT STUDY

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Objectives: The purpose of this study was to evaluate the accuracy of transvaginal and transabdominal sonography in myoma diagnosis, mapping and measurement. **Methods:** This was a prospective study of consecutive pre- menopausal women who underwent myomectomy (MY) or hysterectomy (HY) for benign pathology at the Department of Gynecology of Sapienza University of Rome between December 2015 and May 2017. Myomas were exactly mapped by ultrasonography (US) the day before surgery by two expert sonographers. The number, localization and size of uterine myomas were compared with intraoperative visualization in case of MY and with anatomopathological (AP) findings in case of HY. **Results:** We are including 45 patients: 24 underwent MY and 21 HY. The analysis showed a significant difference between myomas number at US and at AP, with a concordance in 17 of 45 patients (38%). In 76.5% of these was exactly identified myomas number at US when there were 1 myoma, in 12% when the number of myomas was equal to 2 or 3 and the concordance rate decreases with increasing myomas number. Stratified analysis shows that we identify by US myomas with size between 10 and 25 mm, underestimate their size when they are greater than 26 mm and we miss those under 10 mm especially if associated with very large myomas (>70 mm). US detection failure was significant for myomas with maximum ranged diameter of 31–50 mm (p 0.042), 51–70 mm (p 0.036) and > 70 mm (p 0.021), with a medium size difference respectively of 12,5 mm, 18,7 mm and 28,1 mm. The mapping of not detected myomas at US was: 63% for intramural posterior myomas, 55% for subserous anterior myomas, 51% for intramural anterior myoma, 40% for subserous posterior myomas and 7% for submucosal anterior myomas. There was no difference between two groups (MY vs HY). **Conclusion:** US is efficient in detecting myoma presence, but its capacity for exact myoma count and mapping decrease for intramural side.

O09-1149
PREGNANCY OUTCOMES IN INFLAMMATORY BOWEL DISEASE - A RETROSPECTIVE STUDY

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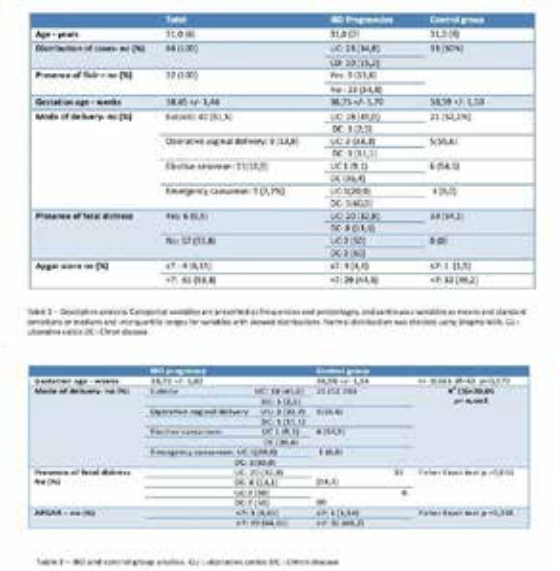
Problem statement: Inflammatory bowel disease (IBD) affects women in the childbearing age. Pregnancy is often associated with worst outcomes, particularly in cases of poor disease control before pregnancy[1]. IBD has been described as a risk factor for prematurity, fetal growth restriction, low Apgar rates, and caesarean delivery. However, the results of studies are inconsistent[1–3]. Fear of congenital malformations related to medications is the main responsible for lack of compliance treatment during pregnancy [4]. The aim of this work is to evaluate the effect of IBD on pregnancy outcomes and study the effect of disease relapse during pregnancy. **Methods:** A retrospective case control study was conducted. Pregnant women with IBD with pregnancy surveillance and delivery in our institution were selected. Maternal sociodemographic information, obstetric history, disease control, pregnancy and delivery data were recorded. Consecutive delivery resulting of low risk pregnancy registered was selected as a control. Characteristics of both groups were compared. Statistical analysis was performed using SPSS 24. **Results:** 51 women were identified. 19 were excluded: 11 were pregnant before disease was diagnosed, 4 did not had term pregnancies and 4 cases with missing information. 32 pregnant women with IBD were included in the analyses. 32 women were identified for the control group. There were no significant differences in outcomes between the control and IBD group except for the type of delivery, with emergency caesarean section more often observed in the disease group than in the control group (12,5% vs 3%; χ^2 (3) =20,05; p= 0,003) (Table 2). Disease reactivation was associated with a significant difference in fetal intrapartum distress compared with woman with good disease control (p=0,043) (Table 3). There were no differences on gestational age at delivery and Apgar score. **Conclusion:** Pregnant women with IBD had similar pregnancy outcome compared to women with low risk pregnancy, but with an increased rate of caesarean delivery. This study provides evidence that disease relapse during pregnancy is related to poor obstetric outcomes, with increased fetal intrapartum distress showing the importance of a good control of the disease activity during the pregnancy. This also reinforces the need for prenatal counselling so that women won't stop medication because of fear of teratogenicity. Sample size may be a limiting factor in our study.



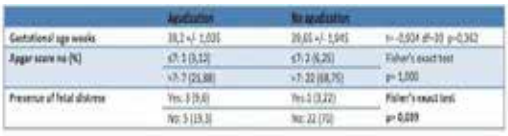


Table 3 - Gestational outcome with and without apudication

Bibliography:

- Poturoglu S, Ormeci AC, Duman AE. Treatment of pregnant women with a diagnosis of inflammatory bowel disease. World J Gastrointest Pharmacol Ther. 2016;7(4):490.
- Nguyen GC, Seow CH, Maxwell C, et al. The Toronto Consensus Statements for the Management of Inflammatory Bowel Disease in Pregnancy. Gastroenterology. 2016;150(3):734-757.e1.
- van der Woude CJ, Ardizzone S, Bengtson MB, et al. The Second European Evidenced-Based Consensus on Reproduction and Pregnancy in Inflammatory Bowel Disease. J Crohn's Colitis. 2015;9(2):107-124.
- Correia LM, Bonilha DQ, Ramos JD, Ambrogini O, Miszputen SJ. Treatment of inflammatory bowel disease and pregnancy: a review of the literature. Arq Gastroenterol. 2010;47(2

O10-1067
TRI-NUCLEOTIDE CONSORTIUM OF ANDROGEN RECEPTOR ASSOCIATED WITH RETROGRESSIVE SPERM MOTILITY

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Luxuriant tone, immaculate and precise framework, rhythmic exactitude, stringent dynamic control and near perfect balance of hormonal homeostasis were the key features that were ever present not only in a cell but required throughout the normal functioning of the entire body. Any deviation in the hormonal homeostasis might be the ignitable precursor for genomic instability that inflames the genomic rearrangements and a leading cause of cancer. It was axiomatic that androgen mediating signaling is implicated in regulating the expression of reproductive related genes. Although remarkable advances have been made in unraveling the mystery of a human androgen receptor gene (AR), which is located on the long arm of X chromosomes (Xq 11-12). It is well equipped with 8 exons span for 186.5 kbp length. Mechanically, the N-terminal transactivation domain of an encrypted AR gene holds two facets of tri-nucleotide repeats such as (CAG)n and (GGC)n respectively, which encodes polymorphic homopolymeric long stretches of polyglutamine and polyglycine tracts of amino acids. We retrospectively, investigate the singleton or combinatorial effects of the length of these repeats on asthenospermic male reproductive hormones, clinical parameters, semen analysis as well as sexual assessment function of 210 outpatients along with 125 normal subjects. Sexual assessment was executed using the International Index of Erectile Function (IIEF-15 score) which measures erectile function (EF), orgasmic function (OR), sexual desire (SD), Intercourse satisfaction (IS) and overall satisfaction (OS). Our findings suggesting that long (26 CAG) n repeats have associated an inverse correlation with circulatory FSH and T, whereas long (25 GGC) n repeats have moderated affiliation with reduce sperm concentration. The study revealed a novel finding by exploring the negative correlation between elongated (CAG) repeats and the cumulative IIEF-15 score, Orgasm function (OR) and Erectile function (ED) in asthenospermic men. This study for the first time explore the previously concealed landscape of Tri-nucleotide correlation with sexual functions, semen parameters and hormonal assay of asthenospermic Punjabi men. Such research delivered a benefit for the understanding of deep insight exploration of an ongoing regulatory mechanism involved in the sexual development and spermatogenesis.

O11-1353
EVA - A RANDOMIZED CONTROLLED TRIAL OF LATERAL EPISIOTOMY VERSUS NO EPISIOTOMY IN VACUUM ASSISTED DELIVERY - IMPLEMENTATION CHALLENGES

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Problem statement: Operative vaginal delivery (OVD) occurs in 10% of non-parous women in Sweden, and almost all are vacuum extractions. The rate of obstetric anal sphincter injury (OASI) is 12-14% in these women, compared to 6-7% at spontaneous vaginal delivery (SVD). Several studies now indicate that a lateral/mediolateral episiotomy at OVD reduces the risk of a OASI, especially in non-parous women with aOR 0.11-0.73. However, lateral episiotomy in Sweden is not associated with a reduced risk of OASI per the Swedish Medical Birth Register (SMBR), and episiotomy rates are low (SVD 3-5%, OVD 10-15%). The aim of our study is to investigate if lateral episiotomy at OVD in non-parous women reduces the rate of OASI, and if short, medium and long-term complications after episiotomy versus no episiotomy (possible spontaneous tear) differ. **Methods:** We have initiated a randomized controlled trial of lateral episiotomy versus no episiotomy in OVD in non-parous women. At least 250 women in each allocation group are needed to show a 50% OASI prevalence reduction from 14% to 7% with 80% power and p 0.05. Up to 1400 women will be randomized to show a 30% reduction. Several sites will be engaged. Trial inclusion is expected to be completed within 3 years. Women are included after gestational week 25 up to delivery, and randomization is done at decision on OVD. Primary outcome is clinical diagnosis of OASI. Several secondary outcomes are collected from SMBR and from web-based questionnaires at 0, 2, 12, and 60 months assessing pain, incontinence, prolapse, sexual function, quality of life, childbirth experience, and subsequent births. **Results:** The trial opened for randomization June 30, 2017, after years of preparations. Randomization has been slow, mainly due to a reluctant attitude in the staff in the delivery ward, based on expectations on negative attitudes in patients, deleterious effect on labor to talk about possible complications, and increased pain and sexual problems compared to spontaneous tear/no tear. However, informing the patients and staff in antenatal care has posed less problems than expected. If the patient is properly informed before active labor, it is conceived as more ethical by the delivery staff. Therefore, information in three steps has been organized:

- In the antenatal clinic (written and oral information).
- At admission to the delivery ward, when pain relief has been offered.
- At decision on OVD; former consent is confirmed.

We have found some persuasive arguments to successfully include women before labor:

- Prioritized delivery suite. Women who participate will be prioritized for a delivery suite at Danderyd Hospital. This is a strong argument in Stockholm, due to a shortage of staffed delivery suites.
- Explaining randomization: It is not a lottery between right or wrong. We don`t know the answer to what is best. So far, the doctor's experience or preference has been determinant.

- Being randomized in the study guarantees an optional 6 months` post-natal visit, a 5-year follow-up of pelvic floor function, and easy access to gynecological help through the research team.

Conclusion: Implementing an RCT of a controversial intervention (lateral episiotomy) associated with another undesirable intervention (vacuum extraction) is challenging. Identifying a few strong selling points and to organize the information in clear steps is crucial for success.

O12-1333

THE EFFECT OF EARLY SKIN TO SKIN CONTACT ON NEONATAL COMPLIANCE AND BREASTFEEDING SUCCESS IN PRETERM LABORY

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Aim: This study is a semi-interventional randomized controlled trial to determine the effect of early skin to skin contact on neonatal compliance and breastfeeding success in preterm labor. **Methods:** The sample of the study consisted of 20 interventions and 30 controls, totally 50 mothers and premature babies. The sample size is calculated by power analysis (80.0% power). Data was used by descriptive data collection form, neonatal compliance form and LATCH Breastfeeding Charting System. Fisher's exact chi-square test, Student's T test and Mann Whitney U test were used in the evaluation of the data. **Results:** The difference between the groups in terms of the study, the time to start breastfeeding and the duration of breastfeeding was found to be significant in favor of the intervention group ($p<0.05$). Also, LATCH score mean of the intervention group is higher than the control group on the 14th postpartum day ($p<0.05$). It was found that the level of compliance and satisfaction with maternal role of the women in the intervention group was higher than the control group ($p<0.05$). There was no statistically significant difference between groups per feeding only with breast milk, transition to supplementary food and average increase in birth weight ($p> 0.05$). Body temperature, respiration rate and blood glucose level were found to be statistically insignificant in the intervention and control groups in the first hour postpartum ($p> 0.05$). **Conclusion:** It has been determined that the effect of early skin to skin contact have a positive effect on compliance with maternal role, neonatal compliance and breastfeeding success **in** preterm labor.

O13-1178

GALECTIN-3 LEVELS AND DNA FRAGMENTATION INDEX IN EJACULATED SPERMATAZOA OF MEN WITH INFERTILITY

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Problem Statement: Galectin-3 is a protein from a large growing family of animal lectins. Although Galectin-3 is involved in immunomodulation, and cancer progression, the implications of Galectin-3 expression in the male reproductive tract needs to be investigated. The detection of Galectin-3 in Sertoli cells, that support spermatogenesis, and in prostasomes in seminal plasma implies a regulatory role of this protein on spermatogenesis or sperm function. This study is designed to explore the levels of Galectin-3 in seminal plasma of infertile men. The correlation with basic semen parameters (sperm count, motility and morphology) and DNA fragmentation were performed to identify the association with sperm quality and quantity. **Methods:** The study population is composed of 152 infertile men. Exclusion criteria is as follows: abnormalities in medical history/physical examination, subclinical genital infections, crytptorcidism, cancer, varicocele, heavy smokers (20 cigarettes/day), and azoospermia. Semen samples were obtained by masturbation after 2–5 days of sexual abstinence and stored in sterile containers. Basic sperm parameters were evaluated per World Health Organization criteria (WHO, 2010). Total progressive sperm count (TPMSC) were calculated [(total ejaculated sperm count x progressive motile sperm)/100]. Oligozoospermia were defined as sperm count 15mil/ml. The remaining sample were used for cytometry test for detection of DNA fragmentation as described earlier (Erenpreisa et al., 2003). DNA fragmentation index (DFI, %) were defined as the proportion of sperm cells with abnormal DNA conformation. Seminal plasma Galectin-3 were analysed by chemiluminescence reaction by a commercially available kit (Architect iSystem, Abbott). **Results:** The mean age of the patients were 34.67±5.43 years (minimum 24 and maximum 52). 16.4% of cases had oligozoospermia and 83.5% had normozoospermia (≥15mil/ml). The mean age of the patients with oligozoospermia and normozoospermia were similar (p0.05). The mean DFI of the cases were 24.27%. The DFI was significantly higher and TPMSC were significantly lower in oligozoospermia compared to normozoospermia group (25% vs 21%, p=0.03 and 0.54 vs 18.60 x 10^6, p0.001; respectively). The mean Galectin 3 levels of all cases were 216 ng/mL (min 8.6 ng/mL -max 794 ng/mL), 162 ng/mL in oligozoospermiaspermia and 90 ng/mL in normozospermia group (p0.05). When data of all patients is analysed, neither DFI nor Galectin-3 levels were correlated with semen parameters like sperm count, motility, morphology, and TPMSC. In oligozoospermia group, Galectin-3 levels were found to be negatively correlated with progressive motile sperm count (r= -0.479; p=0.024) **Conclusion:** In the previously published articles, galectin-3 was identified inseminal plasma in prostasomes. And prostasomes fuse with sperm in vitro, to increase sperm motility by delivery of intra-prostasomal calcium stores. Although, conventional semen analysis and DFI were not correlated with Galectin-3 levels in normozoospermia cases, the results from this study shows that there is negative correlation of seminal plasma Galectin-3 levels with progressive motility in oligozoospermia group. Therefore, our data might indicate the role of Galectin-3 in sperm function. To clarify the possible role of Galectin-3 in human spermatogenesis and sperm function, future studies with larger samples are needed.

O14-1213

PROBLEMS EXPERIENCED BY OBESE PREGNANT WOMEN IN THIRD-TRIMESTER AND EFFECTS OF OBESITY ON QUALITY OF LIFE

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The study was planned to investigate quality of life (QoL) in obese pregnant women within third trimester and compare pregnancy problems of obese women to those with body mass index (BMI) 30. One hundred and ninety-six women with 28≥ gestational weeks and admitted to the clinic with the aim of control were included into this descriptive study. A 37-item questionnaire and the WHOQOL-BREF scale were used to accumulate the data. Descriptive statistics were evaluated with number, percentage, mean and standard deviation, and the chi-square was used as the significance test. In the comparison of intergroup parametric data, the Student's *t* test was used. Mean age rate, gestational age, number of pregnancies and number of births of study participants were 26.2±5.8, 36.8±3.3, 2.6±1.6 and 1.3±1.3, respectively. Of all participants, 54.6% were graduated from primary school and under, 94.4% were housewives, 70% were from middle income families, 70.9% were from nucleus families, 8.2% were cigarette smokers, 25.5% were primigravidas, and 70.9% had planned pregnancies. Of all pregnancies, 36.7% performed exercises (walking, etc.), 22.4% were afraid of gaining weight, 19.9% were under the threat of abortion, and the pregnancies of 35.2% were at risk. Also, 26%, 14.8%,45.4%, 14.8%, 53.6%, 71.4% and 23.5% were determined to suffer from hyperemesis, infections, stomachache, psychological problems, insomnia, exhaustion and constipation, respectively. Educational status of pregnant women with BMI≥30 was statistically significantly lower than those with BMI30, and in terms of risky pregnancies, a significant differecence was observed between both groups. However, the status of smoking and fear of weight gain in BMI≥30 group were higher than those with BMI0.05). When both groups were compared in terms of QoL and subdimentions, both groups were observed to have similar results as to physical (p=0.341) and social (p=0.274) areas, although a statistically significant difference was found between both groups regarding psychological (p=0.034) and enviromental (p=0.05) areas. Obese pregnant women were detected to have lower educational status and higher rate of smoking and fear of gaining weight. In such women, psychological and enviromental areas among subdimentions of QoL were found to be affected negatively.

O15-1159

TRAUMATIC BIRTHS AFFECT BOTH MOTHER AND NEWBORN NEGATIVELY, FOR SURE; WHAT ABOUT A MIDWIFE? A LITERATURE GAP IN TURKEY!

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A midwife is a person who ensures the healthy termination of normal deliveries. However, midwives do not always encounter healthy and prosperous normal deliveries, unfortunately. The bond between the midwife and the woman giving birth is very strong and any complications or loss during birth can cause trauma by negatively affecting the woman as well as the midwife. The fact that midwives accompany or witness traumatic births can be adversely affectedin terms of psychological health, quality of job-life and even family life, resulting in post-traumatic stress disorder.Despite the fact that there is a special empathic bond between the woman who will give birth or who gave birth and the midwife, there is a limited information on the psychological or emotional distress of midwives who witnessed traumatic births and information on precautions to be taken in the literature. Unfortunately, the prevalence of the trauma midwives experienced after a traumatic birth in Turkey is unknown!!! There is no such study in Turkey. On the other hand, it is reported in international literature that the perinatal posttraumatic stress disorder experienced by midwives is between 17% and 33%. In addition, it has been reported that midwives with post traumatic symptoms are correlated with negative world-view beliefs and burnout situations. Thus, it is very important to know midwives, especially the ones working in delivery rooms, can be negatively affected in terms of psychology, quality of job-life, after a traumatic birth, to determine prevalence rates by examining midwives working in delivery rooms and obstetrics and gynecology clinics in Turkey in terms of traumatic stress disorder, and to provide support programs for the ones showing symptoms.

O16-1287
THE USE OF SILDENAFIL IN EARLY ONSET INTRAUTERINE GROWTH RESTRICTION

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Early onset intrauterine growth restriction has traditionally had a poor perinatal outcome in the past. Recently, Sildenafil citrate has emerged as a potential management option in the treatment of this condition as it is postulated that its vasodilatory effect improves uterine blood flow and hence outcome at delivery. Two cases of severe early onset intrauterine growth restriction who presented to us within days of each other were treated with Sildenafil and the outcome of the pregnancies was followed up.
The first case was a 39-year-old primigravida who was diagnosed with asymmetrical growth restriction at 22+4 weeks into the pregnancy. An anomaly scan performed at the same time was reportedly normal. This was classified as Stage 3 fetal growth restriction per the Fetal Medicine Barcelona Growth Calculator. She was started on Sildenafil 25 mg three times a day and Doppler studies showed improvement in velocimetric profile over the following weeks. The fetus, however, showed signs of distress at 30+2 weeks of gestation with contractions on cardiotocography and was delivered by emergency Caesarean section. The baby, a male, was born in good condition weighing in at 840g and was assigned Apgars of 4,4,8 at 1,5,10 minutes of life respectively. He was noted to have hypospadias on transfer to Neonatal Intensive Care but made good progress in the first month of life. On day 28 he developed fulminant necrotizing enterocolitis and underwent a laparotomy. Following this, the baby's condition never improved until on day 41 it was decided to withdraw care.
The second case studied was a much younger 23-year-old primip who presented with Grade 3 intrauterine growth restriction at 23+3 weeks of gestation. The fetus appeared structurally normal and all other investigations for growth retardation were negative. In this case, the patient also had high blood pressure and was started on a dose of 20mg Sildenafil citrate three times a day. This did not lead to significant improvement in Doppler indices and a decision for delivery was taken at 30+1 weeks. Birthweight was 740g and Apgars at 1,5 minutes were 7,8. On admission to intensive care, the baby was noted to have ambiguous genitalia and further investigations revealed hyperbilirubinaemia, an atrial septal defect and a patent ductus arteriousus. Despite this, the baby made steady but slow progress and was discharged home after several weeks.
In conclusion, when intrauterine growth restriction presents very early the outcome for the baby is rarely good. Very often monitoring of the fetus shows early deterioration of Doppler indices which could eventually lead to intrauterine demise. The aim of management is to get the fetus to viability and deliver in a good condition before this happens. This is where Sildenafil seems to be a useful tool. It acts via its vasodilatory effect to increase uteroplacental blood flow and thus promote fetal growth. In both cases presented the growth restriction was due to placental insufficiency since other causes were excluded. In the second case, there was an element of hypertension which might have worsened the prognosis. Interestingly the use of Sildenafil in the first case was associated with improvement in Dopplers while in the second case although there was next to no amelioration of Doppler flow, the infant survived and is doing well so far. Also of interest is the fact that both babies had abnormalities of genitalia with hypospadias and ambiguous genitalia being diagnosed at birth.

017-1443
AN EVALUATION OF OVARIAN RESPONSE AND PREGNANCY RATES WITH THE USE OF GROWTH HORMONE AS AN ADJUNCT TO IVF IN POOR RESPONDERS WITH AMH AS BIOMARKER

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There were 201 women in total, with 98 in the control and 103 in the study group. The mean age of the study group was older (38 years vs 36 years) and the control group had higher AMH levels, especially amongst the respondents under the age of 40. Both groups were statistically significantly different with regards to AMH levels and age, p-values 0.001 and 0.007 respectively. The number of oocytes, embryos, embryos for embryo transfer (ET), their grade and cell number were recorded post intervention. Results showed that the two groups produced on average equal numbers of oocytes, embryos and embryos for ET. The control group produced proportionally more grade 1 embryos (64%) than the study group (55%). With regards to pregnancy achievement, the study group exhibited more pregnancies than the control group (35 vs 30) although this was not statistically significant (p-value 0.05). The control group had on average, women of slightly younger age falling pregnant (35 years), whereas in the study group the average age was 38 years. The study group had more respondents over the age of 40 years, i.e. 14 women vs 6 in the control group achieved pregnancy. AMH levels were higher amongst women who achieved pregnancy in the control group (3.61 vs 2.78) but were only negligibly different for positive responders in the study group (1.57 vs 1.32). There was no statistically significant difference noted for the quality and quantity of the embryos for ET between the two groups (measured post hoc). **Conclusion:** This study suggests that GH is a useful adjunct in the treatment of women who are poor responders to standard ovarian stimulation protocols. It demonstrated that despite the fact that the study group had both on average an older age and lower AMH levels (both markers of poor IVF responders) , they had significantly more pregnancies than expected for those under the age of 35 and relatively, although not statistically significantly more pregnancies than expected for those over the age of 35 (28% vs 25%).

O18-1502
THE EFFECTS OF HIV INFECTION AND ANTIRETROVIRAL THERAPY ON OVARIAN RESERVE AND IVF SUCCESS

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Design: Retrospective randomized study. **Setting:** BioART Fertility centre/ Durban University of Technology. **Target population:** HIV positive females undergoing IVF treatment. This target population is further subdivided into patients who are on antiretroviral therapy and those who are not. **Intervention(s):** The ovarian reserve was measured using two biomarkers: antimullerian hormone (AMH) and the antral follicle count (AFC). The blood concentration for AMH levels was measured using the automated Beckman Coulter Access AMH assay. The AFC was continuously measured using transvaginal ultrasound. Viral load and CD4 lymphocyte counts were measured using the ROCHE COBAS Ampliprep and flow cytometric analysis tests, respectively. **Results:** A total of 79 patients started IVF treatment and only 75 reached embryo transfers. 21 positive pregnancies were achieved. 20 (95%) of these patients had a CD4 count greater than 200. Furthermore, from the total of 21 positive pregnancies, 9 patients (43%) were not on antiretroviral therapy and 12 patients (57%) were on treatment. The HIV seropositive population has a statistically lower AMH than the HIV seronegative population (sig.0.011). **Conclusion:** The ovarian reserve, as depicted by the antimullerian hormone concentration in HIV seropositive patients, is significantly lower when compared with expected age related AMH levels. However, there is no statistically recognizable difference between the AMH levels of patients who are on antiretroviral therapy and those who are not. Furthermore, the viral load and CD4 lymphocyte counts did not seem to influence the ovarian reserve. There were significantly fewer pregnancies in the HIV group as a whole (28% vs 34.5%). 95% of those who had conceived had CD4 lymphocyte counts above 200, suggesting that CD4 counts may influence conception. There were more pregnancies

in the ARV treatment group versus those who were not on treatment but this did not reach statistical significance (57% vs 43%). The mechanism by which HIV infection influences AMH and ovarian reserve remains speculative. Time from onset viraemia to actual diagnosis may play a significant role. Since ovarian reserve is largely irreversible, it would be important to evaluate the long-term influence of ARV'S/CD4 count and viral load on the rate of ovarian depletion and hence future fecundity.

019-1394
USE OF MISOPROSTOL IN THE PREGNANCY TERMINATION IN THE SECOND TRIMESTER IN WOMEN WITH PREVIOUS CAESAREAN SECTION

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Objective: Evaluation of efficacy and safety in the use of analogs of PGE1, misoprostol, to induce abortion or birth in the second trimester of pregnancy in women with previous caesarean section (one or more). **Introduction:** Misoprostol, a synthetic prostaglandin E1 analogue, has largely replaced all the other techniques for ending pregnancy, due to its low cost, high efficiency, safety, easy of use, and storage. For different techniques of pregnancy termination, a high incidence of uterine ruptures and hemorrhages has been reported in women with previous caesarean section in the second trimester, compared to women without cicatricial uterus. The safety of using misoprostol as a stimulant for inducing labor in the second trimester in women with cicatricial uterus still has issues to clarify. **Materials and methods:** Participants in this study included patients at U.H.O.G. "Koco Gliozheni" Tirana from April 2004-July 2006, presenting with an indication for inducing labor in the second trimester for pregnancy termination such as: missed abortion (13-22 weeks); fetal death (22-28 weeks); fetal anomalies; PROM; and risk of infection. A total of 118 patients were randomly admitted for birth inducing activity. Those women who have had at least one segmental cesarean section at 13 to 28 weeks' gestational age were included in the study group (13), and women who also underwent the pregnancy termination for the same indications but without previous caesarean section were included in the control group (105). Oral or vaginal misoprostol was administered at a dose of 400μg / 4 h for a maximum of 48 hours [vaginal (42); orally (49); not per protocol (27)]. The data for each patient was thrown into a data system where statistical processing was done. **Results:** Both groups were comparable regarding women age and weight, parity, indications, Bishop`s score, fetal weight and the gestational age. The median time from induction to labor in the study group was 21.5123 hours (SD 14.1583), which had no significant difference with women without caesarean section (control group) 18.6506 SD (13.3743) (p = 0.60). Misoprostol was found safe in this study and there were no cases of rupture or with dehiscence (ruptures of posterior fornix were seen in women without caesarean section). There was no significant difference in percentages of incomplete abortions, blood loss or sepsis among groups. **Conclusion:** Use of misoprostol for the termination of pregnancy in the second trimester in women with previous caesarean section is not contraindicated and appears to have comparable efficacy with the results achieved in women without caesarean section.

O20-1310
THE EVALUTION OF THE USE OF COMPLEMENTARY ALTERNATIVE MEDICINE (CAM), SYMPTOM SEVERITY AND QUALITY OF LIFE IN MENOPAUSAL WOMEN: TURKISH SAMPLES

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Problem statement: Menopause is considered as the end of a woman's reproductive life, generally indicated by the time in women's lives when their menstrual periods gradually stop. Menopause is a natural process that usually occurs at the age between 40 and 58 years. Estrogen deficiency is associated with vasomotor, vaginal and psychological symptoms. While hormone replacement therapy has been found to be the most effective method in reducing the symptoms of menopause, the results of clinical trials such as the Women's Health Initiative (WHI) indicated the potentially negative health consequences of HRT on cardiovascular health and breast cancer. Therefore, women were prompted to seek alternatives to estrogen for managing the symptoms. Eventually, the use of CAM for managing the menopause symptoms has been increasing worldwide. **Purpose:** This study was designed as a cross-sectional descriptive study to assess the use of CAM, quality of life and symptom severity in menopausal women. **Methods:** The study was conducted at a large state university hospital in Turkey between November 2015 and December 2016. The study was carried out with 314 voluntary participants. Data collection was performed using a socio-demographic questionnaire, Menopause Rating Scale (MRS) and Menopause-Specific Quality of Life Questionnaire (MENQOL) through face-to-face interviews. The data were evaluated using the SPSS 20.00 statistics software. The number, percentage, Mann-Whitney U and Kruskal-Wallis tests were used in the analysis. A p0.05 was considered as statistically significant. **Results:** Most of the participants were married (81.5%) and primary school graduates (43%). The mean age was 55.2. 65.9% of them had equal incomes to their expenditures, 70.1% of them lived in a city and 71.3% of them were housewives. While 67.8% of 314 participants used CAM, 91.5% of them did not tell their physician about their use of CAM, and most of them (61.9%) reported that they heard the information about the method from the media. The most commonly used CAM method was exercise. Pray had the highest satisfaction rate (98%) among the CAM methods. There was no significant difference when the total MRS, MENQOL scales` scores of the participants who used and who did not used CAM were compared. A statistical significance was only found in the psychological subscale of the MRS scale (p0.05) among the subcales. **Conclusions:** The use of CAM is common among menopausal women in Turkey. However, the unconscious and indiscriminate use of CAM by women without prescription and the knowledge of their physician per the learned knowledge from media programs may harm them. Furthermore, the psychological menopausal symptoms were found to be more severe among CAM users. This finding suggests that women should correctly use and apply CAM under monitoring of a physician rather than unconscious using of unprescribed CAM.

O21-1335
COMPARISON OF INVASION PROCESS OF PERITONEAL ENDOMETRIOSIS AND ENDOMETRIOMA TISSUE IN CHICK CHORIOALLANTOIC MEMBRANE: A PRELIMINARY STUDY

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Problem statement: Endometriosis is defined as functional endometrial gland and stromal tissue located outside the uterine cavity. The unique characteristic of endometriosis is the invasion of the tissue into deep infiltration (deep infiltrating endometriosis) which is like cancer tissue. However, the invasion mechanism in endometriosis is not understandable yet. Endometriosis tissue consists of epithelial cells, stromal cells and smooth muscle cells (especially in peritoneal endometriosis). From the previous study, infiltration of the endometrial tissue requires tissue integrity. Chick chorioallantoic membrane (CAM) is the in vivo model of animal that is usually used for invasion and metastatic tissue observation. The invasion of peritoneal endometriosis (PE) and endometrioma (EMA) into deeper sites are not easily observed in the patient's due to procedure difficulties and ethical consideration. The objective of this research is to evaluate the invasion process in in vivo model by using CAM. **Methods:** PE lesions (n=5 patients, 7 implanted tissues), EMA lesions (n=7 patients, 11 implanted tissues), endometrium (E, n=8 patients, 9 implanted tissues) and a control group (n=6 patients) were implanted on chic chorioallantoic membrane taken from fertilized eggs which were incubated for at least 5 days, to a maximum of 10 days, with 55% relative air humidity, while being rotated hourly. At day 5 of incubation, a circular window (1 cm in diameter) was made in the eggshell and the CAM was ready for tissue implantation. The window was covered with Scotch tape to prevent dehydration. The eggs were placed in the incubator without rotation until day 15 of incubation. The tissues were carefully dissected into uniform pieces of 3-4 mm^3 and transplanted into the CAM. The time duration of the tissue implantation in CAM was 5 days. At day 5 of tissue implantation, the CAM was carefully dissected circularly with the tissue placed at the center and fixed in formalin and embedded in paraffin. Paraffin sections were later cut into 4 um slices and stained with Hematoxylin Eosin for histological evaluation. The evaluation focuses on the invasion process (defined as embedded tissue in the CAM and irregularity of chorion cells) and the tissue integrity (defined by the appearance of the epithelial cells and stromal cells in the tissue). **Results:** The percentage of tissue invasion in the CAM, regardless of full invasion or partial invasion, in PE, EMA

and E are 71%, 36% and 44% respectively. The PE tissue invasion showed that 80% of the tissue was fully embedded in the CAM, whereas EMA and E tissue invasion were 75% and 75% fully embedded respectively. For additional information, most of the invasion tissue showed loss of their tissue integrity and consisted of few epithelial cells. The stromal cells were dominant in almost all tissues including endometrial tissue**. Conclusion:** PE tissue is the most invasive tissue in the CAM than EMA and E tissue. PE tissue also has the highest capacity to embed fully in the CAM, having only a 5% difference with EMA and E. EMA has lower invasiveness capacity in the CAM than E; these findings were not as we predicted. The research is still ongoing to collect more data and to look for proteins that are involved in this invasion process.

O22-1329
ESTIMATION OF PLACENTAL KISSPEPTIN LEVEL IN PREECLAMPTIC PREGNANCIES

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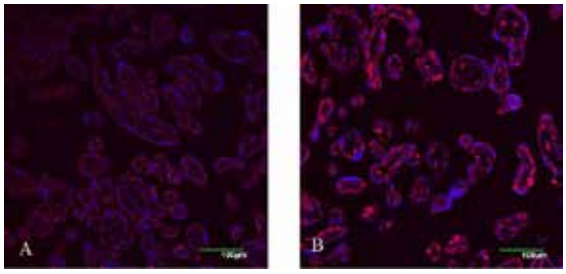
Preeclampsia is a pregnancy-specific condition that is characterized by the development of new onset hypertension and proteinuria after 20 weeks of gestation. Preeclampsia develops in about 10% of pregnancies and is a leading cause of perinatal morbidity and mortality, include intrauterine growth restriction and chronic hypoxia of the fetus. Kisspeptins act through binding with the G-protein coupled receptor 54 (GPR54), also known as the KISS1 receptor. The KP/KISS1R system affects pregnancy and implantation, regulate nutrition and fertility. Kisspeptins are peptide hormones one of their function is a regulation of trophoblast invasion. In vitro, kisspeptin inhibits the migration and invasion of trophoblast cells, thus have a potentional role in restricting trophoblast invasion and subsequent placental development. The aim of this study was to examine protein expression of kisspeptin and its receptor across the maternal-fetal tissues of both healthy and preeclamptic pregnancies. **Methods:** Group 1: 30 preeclamptic pregnant woman aged 22-39 years (30,75±4.86) who undergo cesarian section. Group 2: 20 normotensive pregnant women with singletion pregnancy aged 22-35 years (30,66±4,08) was taken as a control group. Immunohistochemical method were employed to examine kisspeptin protein expression in the placenta. Primary monoclonal antibodies to Kiss1 (1:150, Abcam) and monoclonal antibodies to Kiss1R (1:350, Abcam) were used for IHC reaction. Alexa Fluor 488 and Alexa Fluor 647 (1:1000, Abcam) were taken as secondary antibodies. Scanning of samples was performed on a microscope FluoView1000 (Olympus). **Results**: No significant difference was noticed between preeclampsia and control group regarding to maternal age, also the mean gestational age at delivery was comparable in pregnancies complicated with preeclampsia 37,6±1,85 and healthy controls 38,3±0.53. During histological investigation of placenta numerous morphological features associated with placental disfunction in group with preeclampsia was found, such as infarction, immature placental villi. The detectable kisspeptin immunoreactivity was localized to the villous syncytiotrophoblast and cytotrophoblast cell layers of placental villi. There were more intensive and complete kisspeptin immunostaining in preeclamptic in comparison to healthy pregnancies (Fig.1). Morphometric analysis revealed that average area of kisspeptin expression was 3 times higher in preeclamptic placentas compared to control group. **Conclusion:** Kisspeptin could play a crucial role in development of preeclampsia because limited trophoblast invasion affects subsequent placental development and result in inadequate transformation of the spiral arteries.



O23-1562
VALIDATION OF AN AUGMENTED REALITY ULTRASOUND APP – UPPS (ULTRASOUND APP STUDY)

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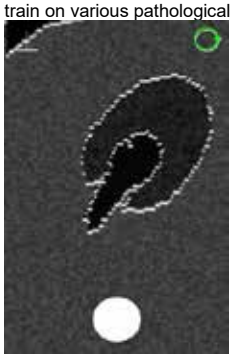
Problem statement: Traditionally ultrasound is taught by learning by doing. Besides access to an ultrasound machine and a supervisor this also requires a patient patient. In order to improve the learning curve, we used our previously published raytracing/-casting-based rendering method (Lato et al. 2016) and a digital human model with a urogenital system inside to create a smart phone app. This app simulates the ultrasound head and display in one device simulating an ultrasound examination. The perspective of the UPPStudy is to evaluate the acceptance of this training possibility and prove its clinical effectiveness. **Methods:** In our tertiary teaching hospital, up to 14 4th year students visit the ultrasound department every week. At the end of their day they had to scan the kidney of the departments consultant in two planes. The time and measurements were collected. Also, students were asked to provide feedback via a questionnaire. In order to evaluate the effectiveness of the app every week the students were randomized in one of the following groups (text book only, text book + app, app only). A statistical analysis between the groups is planned. Currently randomization has met 50% of the planned number (n=100). Results: Preliminary results after 40 students show a trend towards faster and more accurate imaging in the group of text book + app group. With the app only group not yet contributing.

Conclusion: Augmented/virtual reality simulation seem to improve the motorical skills faster and more efficiently and also enable students to train on various pathological findings.



024-1034
THE EFFECTS OF FOLLICULAR FLUID AND SERUM 25-HYDROXY VITAMIN D (25OH-D) LEVELS ON IVF/ ICSI CYCLES OUTCOMES; A PROSPECTIVE COHORT STUDY

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Problem Statement: Per current studies, an epidemic Vitamin D deficiency has been deemed among most of ethnic groups in the world. The presence of vitamin D receptor in female reproductive tissues suggests the regulatory roles in reproductive system. The

recent evidence indicates the potential effects on ovarian function, endometrial receptivity, and embryo quality. The results regarding the effect of vitamin D on clinical outcomes in assisted reproductive technologies are conflicting. **Methods**: This was a prospective cohort study in an academic tertiary care center (IVF Unit, Yas Hospital, Tehran University of Medical Sciences, Tehran, Iran) between March 2015 and March 2016. The study included 160 subfertile women younger than 40 years old and undergoing IVF / ICSI cycles. Serum samples were collected on triggering days. The follicular fluids were collected on oocyte retrieval days. Vitamin D status was measured by assessing 25OH-D levels in using Enzyme-linked immunoassay (ELISA, Accu-bind, Monobind Inc, Lake Forest, USA). Vitamin D insufficiency was defined as Serum 25OH-D30ng/ml. Follicular fluid concentration of 30ng/ml was as cut off point for study evaluation. **Results**: Among all patients, 28.8% (46/160) were vitamin D insufficient whereas 71.3 %(114/160) had normal vitamin D levels. In term of follicular fluid levels, 24.8 % (40/160) were less than 30 ng/ml and 75.1% (120/160) were equal or more than 30 ng/ml. The data regarding to baseline characteristics including age, parity, type and cause of infertility, stimulation protocol, endometrial thickness, and number of transferred embryos were similar between women with different serum and follicular fluid 25OH-D levels. The chemical and clinical pregnancy rates were detected in 49 (30.6%) and 39(24.4%) women, respectively. The clinical pregnancy rate was lower among those women who had follicular fluid 30ng/ml, compared with those women with follicular fluid ≥ 30 ng/ ml (12.5% vs. 28.3%, respectively, ρ= 0.04). The chemical pregnancy rates also varied by follicular fluid 25OH-D concentration being lower in cases with follicular fluid 25OH-D 30ng/ml and higher in cases with follicular fluid ≥3 0ng/ml (17.5% vs. 35%, respectively, ρ= 0.03). No statistically significant differences in chemical and clinical pregnancy rates were detected in women with normal serum vitamin D and the women with insufficient levels (28.8%, 21.7% vs. 32.3 %, 25.4%, ρ= 0.23, ρ=0.14, respectively). **Conclusion:** Follicular fluid (25OH-D) levels 30ng/ml is associated with diminished pregnancy rates in the patients undergoing IVF/ICSI cycles. Serum (25-OHD) status is unrelated to pregnancy outcomes. The sample collections were obtained on the days of ovulatory triggering and ovum pick up during the stimulated cycles. The effects of nonphysiological hormonal milieu (particularly high estrogenic hormones level) induced by exogenous gonadotropins on serum and follicular fluid vitamin D levels might be a confounding factor. The study has not evaluated mechanism by which follicular fluid vitamin D impacts on cycle outcomes. It might be attributed to the effect of vitamin D at level of ovarian functions and/or oocyte/embryo quality. Further study designs are needed to elucidate the potential underling mechanisms, relevant factors, and therapeutic implications.

O25-1071

THE RELATIONSHIP BETWEEN THE PREOVULATORY AND POSTOVULATORY PROGESTERONE SERUM CONCENTRATION AND THE OUTCOME OF THE IN VITRO FERTILIZATION – A PILOT STUDY

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Problem statement: The influence of elevated preovulatory and postovulatory progesterone (P4) on the outcome of in vitro fertilization (IVF) has been in the focus of many discussions in contemporary reproductive endocrinology. Numerous studies have found the adverse effect of elevated preovulatory P4 on the outcome of IVF. Other studies, contrary, failed to find the adverse effect of elevated preovulatory P4 on the outcome of IVF. Hence, there are no clearly established strategies in the treatment of patients with elevated preovulatory P4. The outcome of IVF procedures among normal and elevated preovulatory P4 and postovulatory P4 patients has been analyzed in this study. **Methods:** This is a prospective study which included 354 patients so far; 280 in the control group and 74 in the study group (59 normal responders and 15 high responders). Exclusion criteria for the study were: age 37, patients with high P4 on 2nd, 3rd and 4th cycle day and poor responders. Every other patient who underwent stimulation and IVF/ICSI was included in the study. Data and patients' blood samples for the study were collected during the 3-year period (2015-2017) at the Department of Obstetrics and Gynaecology, University Hospital Center Zagreb. Results were analyzed using SPSS program version 23.0. with the use of mean, median, ANOVA analysis, Spearman`s rho, Pearson Chi-Square, Fisher`s Exact Test Linear-by-Linear Association, Breslow-Day, Tarone`s, Cochran`s and Mantel-Haenszel test. Statistical significance was set at a p value of 0,01. **Results** 79,1% of the patients were in the control and 20,9% of them were in the study group. Patients in the both groups were paired per their age, stimulation protocol, and number of transferred embryos. The mean age of the control group was 33,36 (age 20-37) and 32,91 (age 22-37) in the study group, p0,01, while the mean gonadotrophin dosage was 1814,9 and 1916,22 IU respectively, p0,01. The mean number of retrieved oocytes in both groups was 8,16 (4-27) and 13,53 (4-29) while the mean number of fertilized oocytes was 5,63 (1-12) and 8,62 (1-16) respectively, p0,01. Patients in the control group underwent BET while the patients in the study group were randomly selected to undergo BET or FET. No statistical significance was recorded regarding the implantation and clinical pregnancy rate between the control and the study group in terms of high preovulatory P4 (P44,77 nmol/l)-33,2% vs 28,4%, p=0,486, 95%CI 0,715-2,205 and 24,6% vs 25,7%, p=0,880, 95%CI 0,526-1,705. Higher implantation and clinical pregnancy rate has been recorded with FET as compared to BET transfer in the study group (45,2% vs 31,0% and 38,7% vs 23,5%, p=0,080). ROC curve has shown a P4 of =350 nmol/l on 5th day (embryo transfer day) to be a predictive for positive implantation and clinical pregnancy rate in both groups, p=0,185, 95%CI 0,479-0,605. **Conclusions:** Our results have shown that there is no statistical difference between the high and normal preovulatory P4 patients regarding their age and gonadotrophin dosage, however, higher number of retrieved and fertilized oocytes has been found in the study as compared to the control group. Furthermore, our preliminary results have failed to establish the relationship between the elevated preovulatory P4 and the adverse IVF outcome. This can be explained by a more appropriate timing of embryo transfer at the blastocyst stage (5th day) with the improved implantation and clinical pregnancy rate, although not with statistical significance. Positive implantation and clinical pregnancy rate is associated with P4 of =350 nmol/l on 5th day in both groups.

026-1458

HOW RELIABLE ARE WBC COUNT AND CRP TO MONITOR FOR INTRA-AMNIONIC INFECTION?

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Intra-amniotic infection is a serious complication associated with preterm birth and significant perinatal and maternal morbidity. The accurate diagnosis based on clinical signs of the infection in the pregnant mother is often made at a time when the infection has generalized and septicaemia has ensued. The delayed detection of the early signs of intrauterine infection is probably the repercussion of the immunologic tolerance developed toward the fetus during pregnancy as well as the barrier function of the placenta and membranes. Therefore, we are able to diagnose a chorioamnionitis only later in it's course, when the fetal health and sometimes even the maternal health have already been compromised. In lack of other accurate and safe diagnostic procedures to detect the early signs of intrauterine infection, we often rely on serial measurement of White Blood Cell (WBC) count and C Reactive Protein (CRP) to monitor for chorioamnionitis in patients at risk. But how reliable are these parameters really? Can they detect a local intrauterine infection before it is generalized? To answer this, we analysed retrospectively cases where diagnosis of intra-amniotic infection syndrome was ascertained clinically, histologically or both. These patients were women admitted in our tertiary setting university clinic or in the outpatient care department, diagnosed with cervical incompetence or at imminent risk for preterm birth. The aim of the study was to find out whether there is a significant and clinically useful change of these two blood parameters in the 48 hours preceding the clinical diagnosis of intra-amniotic infection. Only patients from which we had at least two results of each WBC Count and CRP from blood samples withdrawn in the period from one week to 48 hours prior to the diagnosis of chorioamnionitis were included in the study. The earliest blood results obtained one week to 48hrs prior to the diagnosis of chorioamnionitis was set to 100% and served as control. In women receiving a course of steroids, an increase of 4,000 /m3 in WBC count was considered normal to account for glucocorticoid induced leucocytosis and thus substracted before analysis. In addition, we also compared the values of CRP and WBC count after the clinical diagnosis, to their pre-diagnosis measurements. We found that only the values of the WBC count and CRP obtained after the clinical diagnosis of intra-amniotic infection showed a significant increase compare to the controls. Thus, this increase most probably reflected the generalized infection in the mother rather than the local chorioamnionitis. Our conclusion underscores once more the need to establish better feto-placental specific diagnostic tools to monitor the

risk of intrauterine infection.

027-1087
LOW DOSE ASPIRIN AND WELLAGEING

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Should-we prescribe low-dose aspirin as an anti-aging medication? The multitude of properties of aspirin and the potential of these attributes could they prevent the cellular and functional declines, particularly from inflammatory and oxidative sources, evidenced to contribute to aging? Aspirin is a widely administered, anti-inflammatory, cheap and antioxidant medication with a variety of positive effects on the immune system and cardiovascular health. It also may affect oxidant production, cytokine responses, and block glycooxidation reactions. Aging is also an interplay between oxidative and inflammatory stress. Could low-dose aspirine help in improving lifespan? Aspirin, also known as acetylsalicylic acid (ASA), a medication used to treat pain, fever, and inflammation is also used as a long-term primary and secondary prevention to help prevent heart attacks, strokes, and arterial blood clots. The European Society of Cardiology and the American Heart Association recommend that a primary prevention with low dose acetylsalicylic acid (ASA) is appropriate for all age groups and both sexes in the case of a 10-year risk of heart attacks of over 10%. The daily low-dose aspirin therapy inhibits the platelet aggregation and has also long been used in the secondary prevention of cardiovascular diseases. Rather new is the discussion about the oncoprotective effectiveness of acetylsalicylic acid (ASA). It may also decrease the risk of certain types of cancer, particularly colorectal cancer. Meta-analyzes by Peter Rothwell of the University of Oxford at Lancet Oncology 2012 show that a multi-year ASS therapy is effective in oncological primary and secondary prevention, the formation of metastasis. The publications also showed a reduction of the distance metastases in adenocarcinomas up to 70 per cent but rather no effect on the local tumor growth. The American study (Aspirin Intake and Survival After Breast Cancer, M.D. Holmes et al., JCO 2010, 29: 1467-1472) also shows a possible risk reduction for breast cancer by half by regular intake of aspirin. The mechanism of action of ASA is still being discussed: an energy-saving mode is activated in the cells, which inhibits cell growth. Acetylsalicylic acid (ASS) has an inhibitory effect on the cyclooxygenases, the Cox-2. Interactions between inflammatory processes and tumor recidivities are likely. In the oncological primary prevention, a risk-benefit analysis should be carried out with the known side effects of acetylsalicylic acid especially the risk of bleeding. The use is recommended for persons who show a personal or family-related elevated cardiovascular and oncological risk profile like risk of colorectal cancer. Indeed, in the case of an existing indication for thrombocyte aggregation inhibition ASS we should utilize the possible additional oncological advantage. In the secondary prevention after cancer diagnostics, a generous indication is urgently required in comparison to the often-multiple side effects by classical oncological therapies. Another new interresting factor of regular aspirin use is the possible reduction of non-alcoholic fatty liver disease risks. Aspirin under the condition of primary treated hypertonus is therefore also an additional weapon for metabolic syndrome, one of the major aging risk in Western Society.

O28-1212
CONTRACEPTION COUNSELING PROJECT FOR WOMEN ATTENDING A GYNECOLOGY CLINIC IN TURKEY: DOES IT WORK?

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Problem Statement: Contraception counseling is crucial in gynecology, but there is usually not enough time for contraception counseling. Our goal is to screen out women who need counseling before they enter the physicians' room and evaluate the results. **Material and Methods:** All women who applied to gynecology clinic were given Contraception Counseling Project Form consisting of 15 questions including age, education level, ongoing pregnancy/desire for pregnancy, type/number of deliveries, previously/currently used contraceptive method, reasons for not using contraception/changed method, sources of information, cigarette usage, number of days of menses/pad usage, and medical history. All women filled the forms in the waiting room, physician and women evaluated the form in the examination room, appropriate method was advised, and noted. Forms of women who were postmenopausal and who were not sexually active, and which had more than 1 unanswered question were excluded. **Results:** Total number of forms was 1000. 823 were complete, 60 missed out 1 question, 46 were postmenopausal/sexually inactive, 41 missed out more than 1 question, and physicians did not counsel 30 women although they filled out the form. 913 forms (complete +one question missing forms+group not counseled) were accepted for evaluation. Mean age was 35.1±7.9. Education level is summarized in Figure 1. 23.5% were planning pregnancy. 135(14.8%) were pregnant. 62(6.8%) were lactating. 225 (24.6%) were smokers. 700(76.7%) had received information regarding contraception; 83(9.1%) from Internet, 2(0.2%) from newspapers, 19(2.1%) from pharmacies, 449(49.2%) from physicians, 34(3.7%) from friends, 64(7.0%) from other resources. 506 women used contraception; 215 women were planning pregnancy. 375 used valid method, 131 used interrupted coitus(Cİ). 41(4.5%) used OCP, 111(12.2%) used IUD, 173(18.9%) used condoms, 4(0.4%) used calendar method, 46(5%) BTL. 9.5% of women didn't use contraception due to difficulty, 41.3% due to side effect concern, 32.7% for absence of sexuality and 16.5% for other reasons. 320(35.0%) used OCP before, 202(63.1%) for contraception whereas 118(36.9%) used due to prescriptions. Mean duration of OCP use was 22.9±37.9 months (1-240). 136 used for **Conclusion:** In Turkey, main source for contraception counseling is the physician. Time must be devoted to effective counseling during visits. Most physicians pay attention to counseling when it is made easier and find appropriate contraceptive methods. **Figure 1:** Education level of women

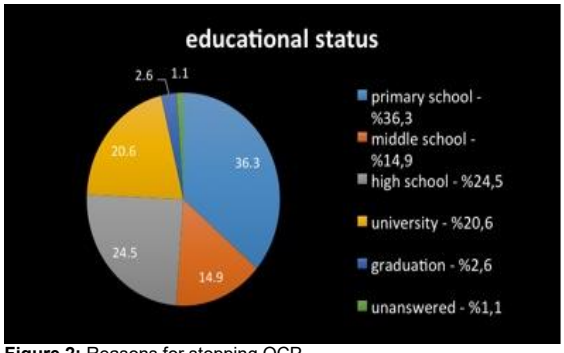
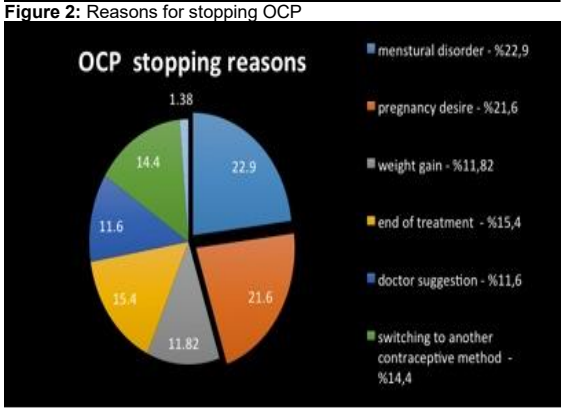


Figure 2: Reasons for stopping OCP



O29-1162
CASE REPORTS OF DIFFERENT MALIGNANT GTN WITH SIMILAR ULTRASOUND APPEREANCE

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Gestational trophoblastic neoplasm is rare event but more often amoung women younger than 20 and older than 45 years. Gestational trophoblastic neoplasm is an abnormality of fertilization and usually appears as a benign neoplasm of chorionic villi. Frequency is 1.03 on 1.000 delivery. Ultrasound is of great but relative value (RCOG) because there is no unique ultrasound model for GTN. This is a case report of three patients with malignant GTN (Choriocarcinoma (2 patients) and Placental Site Throphoblastic Tumor (1 patient)) with a similar ultrasound picture. In all our patients, based upon ultrasound, laboratoric analysis (b-hCG) and histopatologic verification (explorative

curettage) diagnosis of GTN was established. Patients were subjected to surgical treatment. Postoperative histopatological diagnosis of Placental Site Trophoblastic Tumor in 1 patient and Choriocarcinoma in 2 patients was confirmed. Chemotherapy was administrated per the protocol for GTN.

O30-1313
RISK FACTORS FOR PREGNANCY-ASSOCIATED VENOUS THROMBOEMBOLISM IN A MULTI-ETHNIC ASIAN POPULATION

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Problem Statement: Pregnancy-associated venous thromboembolism (VTE), which includes deep venous thrombosis (DVT) and pulmonary embolism (PE), although uncommon, is potentially life-threatening. PE remains as one of the leading direct causes of maternal death in Singapore. Despite its known severity, there is a paucity of local and regional studies on pregnancy-associated VTE risk factors. Knowledge of the risk factors in our population would allow better guidance in our obstetric thromboprophylaxis practices, with the aim of reducing the risk of this severe but potentially preventable condition. **Methods:** In a case-control study, women with objectively-diagnosed VTE during pregnancy or within 6 weeks postpartum, between 2004 and 2016, from KK Women's and Children's Hospital (KKH) and Singapore General Hospital (SGH), were identified. The control group consisted of pregnant women with no VTE who delivered at KKH. Data on maternal and obstetric factors were collected and the odds ratios (OR) for VTE as a measure of relative risk were computed. **Results**: From 2004-2016, 68 cases of pregnancy-associated VTE and 926 pregnant non-VTE controls were identified and included in the logistic regression analysis. Independent risk factors for pregnancy-associated VTE identified include Malay ethnicity, parity ≥ 3, non-O blood group, and smoking. In the postpartum period, women who delivered via caesarean section were found have a higher risk of VTE compared to women who had vaginal delivery. **Conclusion**: Women of Malay ethnicity, parity ≥ 3, non-O blood group and who smoke appear to be at increased risk of pregnancy-associated VTE. Women who deliver via caesarean section are at increased risk of VTE during the postpartum period. Risk assessment for VTE should be done in early pregnancy and at delivery, and women with these risk factors should be considered as candidates for thromboprophylaxis.

Table 1. Inclusion and exclusion criteria

	Cases	Controls
Population	Women with pregnancy-associated VTE	Women with no VTE during pregnancy or postpartum
Sample size	68	926
Period of study	Jan 2004 – Dec 2016	Sep 2010 – Aug 2014
Inclusion criteria	1. Patients with objectively-confirmed VTE 2. Diagnosed during pregnancy or the postpartum period (defined as 6 weeks after miscarriage, stillbirth, or delivery)	1. Viable singleton pregnancies 2. Less than 14 weeks of amenorrhea at their first antenatal visit to KKH
Exclusion criteria	1. Cases with previous VTE 2. Multiple pregnancies 3. Abortion, miscarriage, or foetal death before 24 weeks 4. Cases that were lost to follow-up (unknown pregnancy outcomes) 5. Chronic medical conditions (lupus or renal disease)	1. Multiple pregnancies 2. Abortion, miscarriage, or foetal death before 24 weeks 3. Chronic medical conditions (lupus or renal disease) 4. Complicated pregnancies with aneuploidy or foetal abnormality

Table 2. Patient characteristics (cases versus controls)

Patient characteristics	Cases n = 68	Controls n = 926	p-value
Ethnicity			**0.026**
Chinese	39.7 (27)[a]	50.8 (470)	
Malay	44.1 (30)	27.0 (250)	
Indian	10.3 (7)	10.8 (100)	
Others	5.88 (4)	11.3 (106)	
Age (years)	31.5 ± 6.37 (18-44)[a]	30.6 ± 4.97 (17-45)	0.266[c]
BMI (kg/m^2)	25.7 ± 7.20 (13.9-49.1)	24.0 ± 4.67 (14.6-45.3)	0.157
Parity			**0.005**
0	44.8 (30)	54.1 (501)	
1	28.4 (19)	31.9 (295)	
2	13.9 (9)	9.94 (92)	
≥ 3	14.9 (10)	4.10 (38)	
Non-O blood group	82.1 (55)	58.0 (536)	**<.0001**
Smoking	10.3 (7)	2.59 (24)	**0.005**
Pre-eclampsia	4.48 (3)	2.16 (20)	0.199
Caesarean delivery	57.1 (38)	32.1 (297)	**0.008**
Gestational age at delivery (weeks)[a]	36.4 ± 4.08 (26.7-40.3)	38.7 ± 1.53 (25.0-41.7)	**0.023[c]**
Preterm delivery (< 37 weeks)[a]	40.9 (9)	6.70 (62)	**<.0001**
Newborn birth weight (kg)[a]	2.70 ± 0.84 (0.74-4.02)	3.21 ± 0.48 (0.80-4.50)	**0.007[c]**
Low newborn birth weight (< 2.5kg)[a]	33.3 (7)	7.14 (68)	**0.0001**
Postpartum haemorrhage (> 500ml)[a]	27.3 (6)	11.9 (64)	**0.043**

Footnote: a) Column % (n), b) mean ± Standard Deviation (minimum-maximum), c) In BMI used, d) VTE cases that occurred in the postpartum period only (n=20), e) p-values derived from Wilcoxon rank sum test, BMI: body mass index, LBW: low birth weight

Table 3. Risk factors for pregnancy-associated VTE (Logistic regression including all VTE cases)

Risk factors for pregnancy-associated VTE	Univariate analysis			Multivariate analysis		
	OR	95% CI	p-value	OR	95% CI	p-value
Ethnicity, ref Chinese (n=68)			**0.028**			0.113
Malay	**2.08**	**1.22-3.57**	**0.008**	**1.84**	**1.00-3.36**	**0.047**
Indian	1.28	0.55-2.95	0.568	1.37	0.57-3.32	0.486
Others	0.72	0.26-2.01	0.534	0.62	0.21-1.86	0.396
Age, ref < 30 years old (n=68)			**0.149**			0.163
≥ 35 years old	1.78	0.95-3.33	0.074	1.33	0.63-2.82	0.459
BMI, ref 18.5-24.9 kg/m^2 (n=51)			0.300			
25-29.9	1.28	0.65-2.52	0.474			
≥ 30	2.07	0.98-4.40	0.057			
Parity, ref 0 (n=67)			**0.002**			0.089
1	1.09	0.60-1.95	0.785	1.01	0.54-1.89	0.976
2	1.51	0.68-3.35	0.309	1.32	0.55-3.15	0.532
≥ 3	**4.48**	**2.06-9.79**	**0.0002**	**3.07**	**1.25-7.56**	**0.015**
Non-O blood group, ref O (n=67)	**3.22**	**1.72-6.04**	**0.0003**	**2.97**	**1.55-5.70**	**0.001**
Smoker, ref non-smoker (n=68)	**4.49**	**1.88-10.73**	**0.0007**	**4.82**	**1.88-12.35**	**0.001**
Pre-eclampsia, ref no pre-eclampsia (n=67)	2.40	0.73-7.85	0.148	2.01	0.55-7.32	0.290

Table 4. Risk factors for VTE in the postpartum period (Logistic regression analysis)

Risk factors for VTE in the postpartum period	Univariate analysis			Multivariate analysis[a]		
	OR	95% CI	p-value	OR	95% CI	p-value
Caesarean section, ref vaginal delivery (n=28)	**2.79**	**1.32-5.91**	**0.007**	**4.05**	**1.03-16.29**	**0.049**
Preterm delivery (< 37 weeks), ref term delivery (n=22)	**9.73**	**4.07-23.30**	**<.0001**	4.20	0.80-22.15	0.091
Postpartum haemorrhage (> 500mL), ref no postpartum haemorrhage (n=22)	**2.94**	**1.14-7.58**	**0.026**	2.05	0.47-8.90	0.339
Low newborn birth weight (< 2.5kg), ref normal birth weight (> 2.5kg) (n=21)	**6.48**	**2.58-16.26**	**<.0001**	2.79	0.56-13.96	0.213

Footnote: a) Adjusted for ethnicity, age, BMI, parity, blood group and presence of pre-eclampsia (overall p-value of <0.2 in the univariate analysis). None of these were found to be statistically significant risk factors for VTE in the postpartum period.

O31-1495
IS ULIPRISTAL EFFECTIVE IN TREATMENT OF UTERINE FIBROIDS?

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Problem statement: To evaluate Ulipristal in treatment of uterine fibroids and its potential role in reduction of surgical treatment of patients with previously diagnosed uterine fibroids. **Methods:** In this prospective study 40 patients with uterine fibroids were included. The main indication for treatment was reduction of tumour volume, reduction of uterine bleeding, and preparation for IVF procedure. Total of 69 uterine fibroids were analyzed and the largest dimension, tumour volume and vascularization of uterine fibroid was analyzed before and after treatment with 5 mg Ulipristal tablets for three months. Total uterine volume was also analyzed before and after medicamentous treatment. Statistical analysis with analysis of variance was performed in order to compare parameters before and after treatment with Ulipristal. **Results:** Mean patient's age in our study group was 41,3±1,7 years. The total of 60 fibroids were analyzed in our study. Mean fibroid volume before treatment was 42,57±26,60 ml. Significant reduction of fibroid volume was observed after treatment (30,67±17,9ml). Mean uterine volume before treatment was

273,1±93,7 ml. Significant reduction of uterine volume was observed after treatment (225,94±80,8ml). Reduction of fibroid volume and also of uterine volume was achieved in 35 patients. In 5 patients, after initial treatment with 5mg Ulipristal for 3 months, reduction of fibroid and uterine volume was not observed. Reduction of uterine bleeding was present in all patients during therapy and also after finished therapy. **Conclusion:** Five mg of Ulipristal medicamentous therapy in three month period, has good potential as first line treatment in patients with uterine fibroids, especially in older patients who should be included into IVF procedure, and also patients who need preoperative correction of anaemia and also reduction of tumour volume before operative treatment.

O32-1530
SHOULD 3D SIS BE PERFORMED PRIOR TO HYSTEROSCOPY IN PATIENTS WITH ENDOMETRIAL CHANGES?

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Problem statement: Evaluation of transvaginal 3D multislice saline infusion sonohysterography for preoperative evaluation of the endometrial cavity changes. Methods: In this study 45 patients with suspected endometrial pathology were included. 17 patients with evident pathological changes on transvaginal 3D multislice ultrasound scans were not scheduled for further diagnostic SIS procedure; instead they were scheduled for hysteroscopy. The remaining 28 patients underwent the additional 3D multislice SIS procedure in order to evaluate the uterine cavity and any endometrial pathology. After introduction of the catheter into the uterine cavity, transvaginal 3D scan of the uterus was performed in order to evaluate the catheter position. Once we were assured that the catheter was in the correct position warm saline was introduced into the uterine cavity and during this procedure 3D multislice transvaginal scans of the uterus were performed after distension of the uterine walls. Scans were performed in sagittal direction of the uterus first and then, after additional injection of saline, in transversal direction of the uterus. The volume datasets were stored for further analysis of the uterine cavity pathology. Results: Mean patient's age was 38,7 years. In two patient's 3D multislice SIS revealed normal endometrium and uterine cavity. Single polyp, either originating from anterior or posterior uterine wall, was detected in 15 patients. Polyp diameter ranged from 4 mm up to 25 mm. Multiple endometrial polyps were detected in two patients. Endometrial polyposis was detected in 4 patients after performing 3D multislice SIS procedure. In two patients, endometrial adhesions were confirmed after SIS procedure. In three patients. Submucous myomas were confirmed during SIS procedure. Definitive hystopathological results confirmed endometrial polyps in 21 cases. In one patienet Adenomyosis was found in the polyp tissue. Intracavitary fibroids were confirmed in two cases, and also submucous myomas in 2 cases. Conclusion: The 3D SIS is not time consuming, causes minimal discomfort to the patient and can be performed in office settings. 3D multislice SIS allows not only 3D reconstruction of the uterus and detected endometrial, intracavitary and submucosal pathology, but also imaging of sliced, sectional view of these changes and their association with the uterine wall and position in the uterine cavity. 3D multislice SIS enables precise location of endometrial changes and also correct measurement of the size and volume of diagnosed tumors. The obtained images during SIS procedure can be especially helpful in planning of the hysteroscopic operative treatment and removal of diagnosed tumours.

O33-1350
HOW MUCH DOMINANT FOLLICLES SHOULD BE INDUCED TO ACHIEVE A GOOD QUALITY EMBRYO AMONG POOR RESPONDERS DURING COH FOR IVF-ET? A RETROSPECTIVE STUDY

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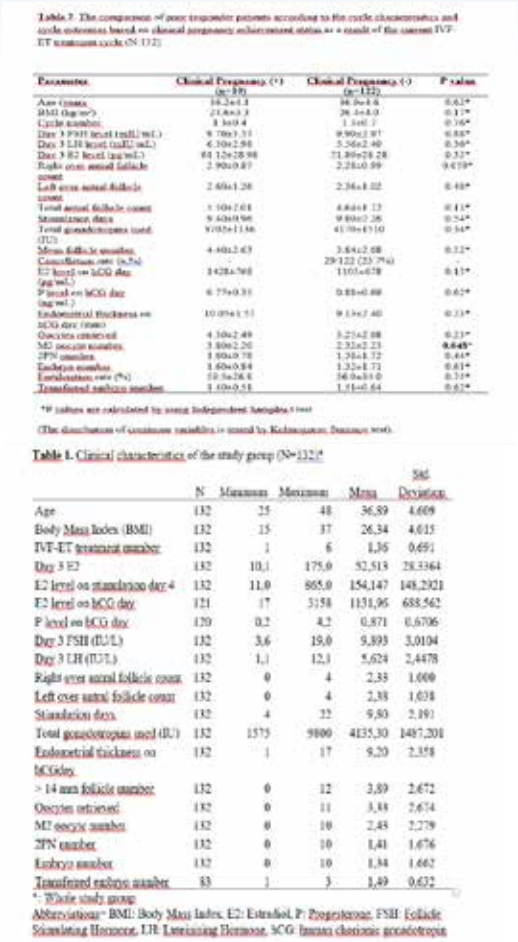
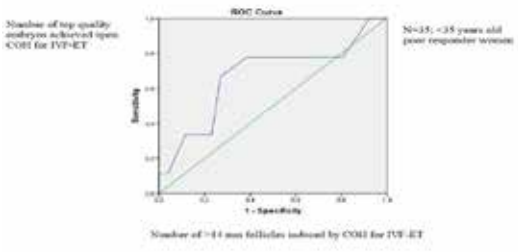


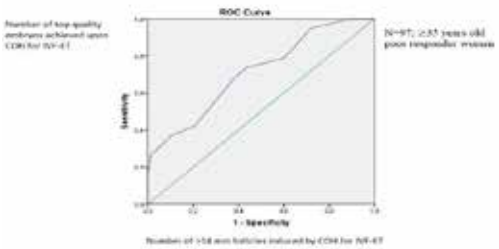
Table 1. Clinical characteristics of the study group (N=132)*

	N	Minimum	Maximum	Mean	Std. Deviation
Age	132	25	48	36,89	4,609
Body Mass Index (BMI)	132	15	37	26,34	4,015
IVF-ET treatment number	132	1	6	1,36	0,691
Day 3 E2	132	10,1	175,0	52,513	28,3364
E2 level on stimulation day 4	132	11,0	865,0	154,147	148,2921
E2 level on hCG day	121	17	3158	1131,95	688,562
P level on hCG day	120	0,2	4,2	0,871	0,6706
Day 3 FSH (IU/L)	132	3,6	19,0	9,393	3,0104
Day 3 LH (IU/L)	132	1,1	12,1	5,624	2,4478
Right ovar antral follicle count	132	0	4	2,33	1,000
Left ovar antral follicle count	132	0	4	2,38	1,038
Stimulation days	132	4	22	9,80	2,191
Total gonadotropins used (IU)	132	1575	9000	4135,30	1487,201
Endometrial thickness on hCG day	132	1	17	9,20	2,358
> 14 mm follicle number	132	0	12	2,89	2,672
Oocytes retrieved	132	0	11	3,88	2,674
MII oocyte number	132	0	10	2,48	2,279
2PN number	132	0	10	1,41	1,676
Embryo number	132	0	10	1,84	1,662
Transfered embryo number	83	1	3	1,49	0,632

*: Whole study group
Abbreviations: BMI: Body Mass Index, E2: Estradiol, P: Progesterone, FSH: Follicle Stimulating Hormone, LH: Luteinizing Hormone, hCG: human chorionic gonadotropin



14 mm follicles induced during ovarian stimulation and top quality embryo achievement among 35 years old poor responder women (N=35; Area under curve: 0.67; p=0.13; %95 CI=0.44-0.89)" width="913" height="679"



14 mm follicles induced during ovarian stimulation and top-quality embryo achievement among ≥35 years old poor responder women (N=97; Area under curve: 0.71; p=0.004; %95 CI=0.58-0.84) " width="922" height="609" /Problem statement: Ovulation induction for in vitro fertilization and embryo transfer (IVF-ET) usually result with poor ovarian response in terms of dominant follicles among poor

responder infertile women. Increasing gonadotropin dose, utilization of adjuvant treatment choices like androgens, growth hormone and luteal phase estradiol have been extensively evaluated before but a unique and effective treatment protocol has not been invented to augment the number of induced dominant follicles assumed to include oocytes. In this retrospective study, we tried to evaluate the prognostic cycle characteristics for achievement of at least one top quality embryo during ovulation induction among poor responder patients. Methods: The medical records of 426 patients with low oocyte yield following controlled ovarian hyperstimulation (COH) treatment for an IVF-ET procedure in our institution between 2008 and 2013 have been evaluated. The patients exhibiting poor ovarian response based on the diagnostic criteria established at Bologna on 2011 by ESHRE were included to the study after exclusion of the patients with male factor, endometriosis, chromosomal abnormalities in either male or female and any other condition contributing fertility potential. The COH and IVF-ET outcomes of remaining 132 patients have been evaluated. Results: IVF-ET cycle outcomes of the patients have been presented in Tables 1 and 2. When women ≥35 years old have been analyzed selectively, the ROC curve analysis revealed a positive significant relationship between the number of 14 mm follicles and top-quality embryo achievement following ovulation induction (Figure 1) (N=97; Area under curve: 0.71; p=0.004; %95 CI=0.58-0.84). When women 14 mm follicles and top-quality embryo achievement following ovulation induction (Figure 2) (N=35; Area under curve: 0.67; p=0.13). When total gonadotropin dose has been evaluated for achievement of at least one top quality embryo (TQE), no statistically significant relationship has been determined regardless of the women's age (N=132; Area under curve: 0.50; p=0.96). Empty follicle syndrome and fertilization failure rates were similar among young and old women when 35 has been assigned as poor prognostic factor for oocyte quality. Stimulation day number, bazal FSH level, total basal antral follicle number have not been found to be correlated with achievement of at least one TQE respectively (r=0.08, p= 0.34; r=0.11, p=0.17; r=0.15, p=0.08; r= Spearman's coefficient). Conversely, hCG day serum estradiol level has been found to be positively correlated with achievement of at least one TQE (r=0.36; p= 0.03). Conclusion: Poor responder patients usually demonstrate poor cycle outcomes during IVF-ET procedures. Achievement of at least one TQE seems to be the main goal at the end of an IVF-ET cycle as restriction for number of transferrable embryos is a reality worlwide. Modification of ovulation induction protocols and utilization of adjuvant agents which have been used for establishment of better cycle outcomes among poor responder patients have not been found to be superior to each other. In this study, we have not observed the clinical benefit of increased follicle number during COH among young poor responders unlike older counterparts. Maybe, milder stimulation protocols aimed to develope a few number of dominant follicles should be selected for young poor responder patients.

O34-1341

BENEFICIAL EFFECTS OF ONION AND CINNAMON ON SEX HORMONES AND SERUM ANTIOXIDANT CAPACITY IN FEMALE RATS EXPOSED TO POWER FREQUENCY ELECTRIC AND MAGNETIC FIELDS

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Problem statement: In this study we investigated whether 50 Hz power frequency electric field of 1.01×103 V/m and the magnetic field flux density of 3 mT have effect on serum sex hormones and antioxidant capacity and if Allium cepa and cinnamon can moderate potential adverse effects of power frequency electromagnetic exposure. **Methods:** Forty female Wistar rats, weighting 220 ± 10 g were used for this study. Rats were allocated randomly to four groups. The first group (the control group) received 3 cc normal saline (0.9%) daily and was treated for 6 weeks. The second group was exposed to power frequency of 3 mT for 4 h/day, 7 days/week for 6 weeks. The third group received Allium cepa (3 cc onion juice) and cinnamon (75 mg/kg body weight) daily for 6 weeks by Gavage method. The fourth group was exposed to power frequency EMF of 3 mT for 4 h/day, 7 days/week and received Allium cepa (3 cc onion juice) and cinnamon (75 mg/kg body weight) daily for 6 weeks by Gavage method. **Results:** Levels of luteinizing hormone (LH), follicle-stimulating hormone (FSH) and estrogen, significantly decreased in second group that exposed to power frequency EMF of 3 mT and 103 V/m (P 0.05) and modified in exposed rats which received Allium cepa and cinnamon (P 0.05). Also, TAC levels were significantly decreased in exposed rats and were moderate in exposed rats received Allium cepa and cinnamon (P 0.05). **Conclusion:** Power frequency electromagnetic field could adversely affect sex hormones and total antioxidant capacity (TAC) levels in exposed rats and Allium cepa and cinnamon could be prescribed as an effective pharmacological supplement to moderate exposure degenerative effects.

035-1247

COMPARISON OF SURGICAL TECHNIQUES FOR TREATMENT OF SUBMUCOSAL MYOMA

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Many clinical studies demonstrate that removal of submucous fibroids allows to improve the HMB and overcome infertility in most cases. Thus, optimization of treatment for submucous uterine fibroids is of great clinical importance. Recently, an intrauterine shaver has been introduced into clinical practice for patients with intrauterine pathology. In our work, we compare the traditional hysteroresectoscopy and shaving of submucous fibroids. And, evaluate the effectiveness of intrauterine injection of an anti-adhesive gel based on hyaluronic acid. In the first group (n = 48) the nodes were removed using a resectoscope, in the second group (n = 19) - using an intrauterine shaver. Three months after the intervention, patients of both groups underwent a control office hysteroscopy. All endoscopic manipulations were performed using Karl Storz equipment (Germany). The effectiveness of the intrauterine antiadhesion barrier "Revireform" (NMTC International, Russia) was evaluated among 22 patients of the first group. A total number of nodes removed by the resectoscope was 53. The gel was injected immediately after resection and evacuation of all resected pieces. Depending on the size of the uterine cavity 1 to 3 ml were used. Control office hysteroscopy was performed for all 48 women 2 months after removal of the myomas. The results of the control examination of the uterine cavity showed that out of 22 women who used hyaluronic acid, only one had intrauterine synechia. Among 26 patients who did not receive the gel, the synechia were found in three. Thus, in our observations, the intrauterine injection of hyaluronic acid reduced the incidence of intrauterine synechia formation from 7.7% to 4.5%. Using the intra-uterine shaver, we removed 20 nodes. Patients of the second group did not receive an anti-adhesive gel, but at control office hysteroscopy, no synechia was detected in any of the cases. The median size of the nodes removed by the resectoscope and shaver was 3.1 ± 1.3 cm and 2.5 ± 0.8 cm, respectively. The size of the largest node in each group was 4.4 and 3.1 cm, respectively. Obviously, the comparison of shaving and resection can very subjective. To make the assessment more standardized for the analysis we isolated cases with a single 2-3 cm submucous node of 0 and 1 type only, and analyzed separately the resection time of myoma and total operating time. We demonstrated that for 0 type nodes, regardless of the diameter, the duration of removal with the shaver was 14% longer than with a resectoscope. As the volume of intramural component of the node increases, the time difference decreases and is about 7%. When comparing the total operating time, shaving remains more advantageous. This is due to the structural features of the shaver, which allow the resected tissue to be evacuated simultaneously with resection, in contrast to the resectoscope. On average, the frequency of "insertion-extraction" of the instrument into the uterine cavity when using the shaver was -1,2, and when using a resectoscope - 7.2 times. The fluid consumption with the shaver was less than with the resectoscope by 27%, and the fluid deficit - was comparable in both procedures. We did not have any intra- or post-operative complications in both groups. The hospitalization time was comparable in both groups (8-24 hours). Antibacterial therapy with cephalosporins of the third generation administered by prophylactic scheme. No difference in the need for NSAID was revealed. Problem of HMB was resolved in 98.5% of cases. Among patients wishing to conceive, 67% became pregnant after surgery in the second group and 54% in the first group. Thus, usage of hyaluronic acid after myoma resection can help to prevent intrauterine adhesion formation and improve fertility outcomes, as well as usage of shaver, as it doesn`t cause electric trauma to the endometrium.

O36-1512
METABOLITES PROFILING IN CULTURE MEDIUMS OF DAY-5 HUMAN EMBRYOS

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Objective: To determine the changes of metabolomic profiles in embryonic culture mediums (ECMs) for the evaluation of quality and implantation potential of human embryos. **Design:** ECMs (163 in total) were collected on day 5 before transfer or cryopreservation. The part of embryos was used in preimplantation genetic screening for detection of aneuploidy karyotypes. Samples were divided on groups according embryo morphological classification (by Gardner), genetic analysis and implantation data. **Methods:** ECMs were diluted by methanol, precipitates were separated by centrifugation and metabolite production of individual embryo was analysed by LC-MS in positive mode. After peak detection and retention time alignment data was analysed using PCA algorithm. **Results:** MS fingerprinting analysis of embryo culture medium showed the significant differences between morphologically divided groups. Intragroup comparisons did not reveal differences between subclasses. Genetic screening of embryos found 33 aneuploid karyotypes. It was shown that chromosome number did not affect the metabolite profiles comparing with normal group. The culture media of embryos that were positive or negative for successful implantation showed specific signatures that allowed to distinguish embryos with different outcomes. **Conclusions:** The characterization of ECMs by LC-MS may facilitate more accurate selection of the best embryo for the implantation, improving single-embryo transfer and thus eliminating the risk and undesirable effects of multiple pregnancies.

O37-1444
ABDOMINO-PELVIC PACKING REVISITED: AN OVERLOOKED TECHNIQUE FOR MANAGING INTRACTABLE OBSTETRIC HAEMORRHAGE

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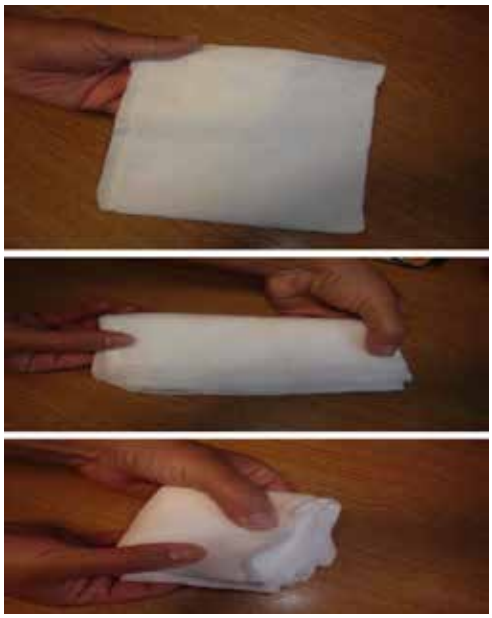
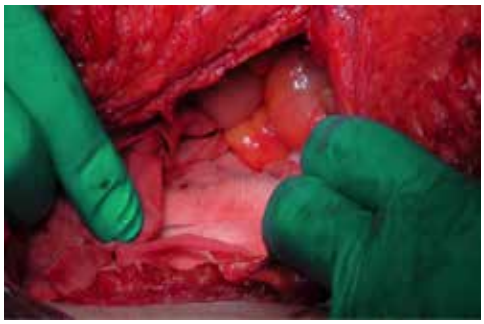
Problem statement: Surgical packing is no longer seen as a “bail out” technique for the less skilled obstetrician who is unable to control haemorrhage using conventional surgical techniques such as suturing. Rather, this skill should be a routine addition to the armament of current practising clinicians. We present a case series of 7 patients in which packing was successful in managing postpartum haemorrhage (PPH) and describe a simple technique of packing using 4x4 inch gauze. **Methods:** Between 2009-17, data of women who underwent abdomino-pelvic packing for intractable postpartum bleeding were collected manually from the labour ward delivery records. These included both pre-and postpartum hysterectomy cases. The primary outcome was success of intraabdominal packing (without need for additional procedures), and secondary outcomes included need for transfusion, length of stay, and postnatal complications such as pyrexia. **Results**: Seven women underwent abdomino-pelvic packing for persistent vascular ooze following delivery; of these, 3 women had already had peripartum hysterectomy for massive PPH, while in the remaining 4, bleeding stopped with packing without having to resort to definitive surgery (one required concomitant intrauterine Bakri balloon tamponade). All 7 women (mean age 39.42 years) had had caesarean section deliveries with a mean estimated blood loss of 4357 mls and mean units transfused of 7.85 units of packed cells. All women had clinical signs of impending coagulopathy when the decision to pack was made. The mean shock index (a measure of haemodynamic stability with a normal range of 0.5-0.7) at the time of decision to pack was 0.93. The mean number of packs inserted was 6. The mean duration of the packs being in situ was 33.71 hours and the mean length of stay following pack removal was 56.57 hours. None of the patients had sepsis or pyrexia following pack removal.

	Age (yrs)	Parity	Hysterectomy	Gestation (wks)	Previous Ops	Fetal wt (kg)	Cause of PPH	EBL (mL)	Units transfused
1	37	2	Y	38	None	3.4kl	Accreta / major previa	12000	8
2	40	4	Y	39	2 CS	3.5	Increta	7500	8
3	30	0	N	38	2 open myomectomies	3.8	Significant adhesions at CS	1000	0
4	40	1	N	38	2 CS	3.44	Adhesions on anticoagulation for pulmonary emboli	3000	3
5	36	1	N	39	2 open myomectomies	2.44	Adhesions and broad ligament haematoma	1800	4
6	34	1	Y	36	1 CS	2.75	Accreta / major previa	1200	36
7	39	1	N	38	1 previous CS midline incision	2.98	Major dense adhesions	3000	6

Conclusion: Continued bleeding before and after peripartum hysterectomy was managed by abdomino-pelvic packing in all 7 cases in this series: this allows supportive correction of hypothermia, tissue acidosis, pending coagulopathy, and hypovolaemia. Correct technique of abdomino-pelvic packing is an essential skill in managing massive obstetric haemorrhage in addition to uterine tamponade, compression sutures, and peripartum hysterectomy





O38-1110
STUDY ON APOPTOSIS OF NEURONS IN MOUSE CEREBRUM BY USING TUNEL AND EXPRESSION OF CASPASE3, 9 AFTER LIVE THREE-DIMENSIONAL ULTRASOUND RADIATION

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Problem statement: Prenatal ultrasoud diagnosis is always a controversial problem, especially 3D and 4D apployment. Does it harm to fetus? Does it provide correct images for medical workers? We studied the effect of live three-dimensional ultrasound radiation on apoptosis of embryo-cerebral cells and expression of caspase3, caspase 9 in late pregnant mice with animal experiment. **Methods:** Thirty pregnant mice were randomly divided into 6 groups,

unexposed group, pseudo-exposed group, 5min-exposed group, 10min-exposed group, 20min-exposed and 30min-exposed group, and 5 mice in each group. Exposed mice were irradiated under the system's probe for 5 to 30 min on pregnant day 16. On the 10th day after birth, the pups of each group were perfused and fixed with 4 % paraformaldehyde; brain slices were made and stained with HE or terminal deoxynucleotidyl transferase-mediated dUTP nick end labeling (TUNEL). Colorimetric method was used to measure caspase 3,9 activity. **Results:** 1) Tunel method: comparing with un-exposed group and pseudo-exposed group, positive rate of apoptosis in 5min-exposed group had no significant statistically difference (P0.05), but in 10min-exposed group, apoptosis positive cells were increased and the findings became remarkable in 20min-exposed and 30min-exposed groups which showed a significant statistically difference (P0.01) compared with other four groups. 2) Caspase3, 9 positive cells were detected in all groups and were remarkably increased in ultrasound exposed group. **Conclusion :** Live three-dimensional ultrasound irradiation for longer duration may result in higher caspase3, 9 activity that lead to excessive neuron apoptosis in fetal mouse cerebrum.

O39–1457
OUTCOMES OF COLORECTAL ANASTOMOSES DURING OPERATION FOR GYNECOLOGIC MALIGNANCY

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Purpose: Many colorectal surgeons are frequently requested for co-operation during surgery for gynecological malignancy, and sigmoid and rectal resection are commonly performed for en bloc resection for cervical cancer or cytoreduction for ovarian cancer. This study was designed to evaluate the feasibility of primary anastomosis after colorectal resection than diverting colostomy. **Methods**: From March 2010 to August 2017, 85 consecutive patients were performed colorectal resection for primary or recurrent gynecological malignancy. Twenty-three patients were received diverting ileostomy or colostomy and the other 62 patients were performed primary anastomoses reconstruction. Two groups were compared demographic data, perioperative outcomes, and anastomotic complications including leakages. **Results**: The mean age of the patients was 57.6 years (range, 24-83), and 69 (81.7%) of patients were ovarian cancer patients. The operation time for colorectal resection was 75 minutes (range, 35-137 min). The intraoperative estimated blood loss was 1020 ml, and 63 patients (74.3%) received packed RBC blood transfusion. There was no significant difference in demographics, intraoperative complication during colorectal procedure, and perioperative complications between two groups. Anastomotic leakage was developed in two patients (3.2%) of primary anastomosis group. **Conclusions**: Primary anastomosis after colorectal resection without colostomy or ileostomy diversion, was found to be safe and feasible methods, during co-operation of gynecologic malignancy with few anastomotic complications including anastomotic leakages. **Key words:** Colorectal, anastomosis, Colostomy, Gynecologic, malignancy.

O40-1572
ROMA WOMEN - AN INSIGHT ON THEIR STANDPOINTS REGARDING REPRODUCTIVE HEALTH

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Problem statement: The Roma women's care for reproductive health is changing only very slowly under the influence of other cultures. The Roma women have an inferior position in their families, which is even further worsened by a lower level of education, unemployment, poverty, etc. The specific needs of Roma women, problems and expectations regarding reproductive health have not been sufficiently researched. **Methods**: A prospective interventional research was carried out (between December 2013 and August 2015) with the view to improving Roma women's care for reproductive health. Within the framework of the entire research, it was carried out in three stages. At the beginning, interviews were conducted with Roma women in their settlement. Their answers provided an insight into their viewpoints regarding reproductive health, the behaviour of health care professionals and the decisions of the women to use the services of the women's clinic. On the basis of the results of the qualitative analysis of the interviews, an educational leaflet was prepared. The leaflet, which was explained to each particular woman that decided to participate in the research, helped raise the Roma women's awareness regarding reproductive health. They become more familiar with different ways of making appointments, time frame and the need for preventive check-up appointments. **Results:** The results of the first part of the research have shown that the Roma women are still tightly connected to their cultural tradition which greatly influences their care for reproductive health. But significant changes can be observed in terms of their views becoming more and more similar to the majority population, which is particularly apparent in younger generation. The usefulness of the leaflet is mostly seen in the provision of urgent data regarding the women's clinic (69%) and in the training for finding a suitable time to see a doctor and make an appointment (73.5%). The answers of women in childbearing age and those before or past it are statistically significantly different. However, it needs to be remembered that educational materials distributed among Roma women have a desired effect only if certain conditions are fulfilled, such as literacy of the target group (at least partial) and the ability of the women to identify with the materials (in this case women in childbearing age.) **Conclusion**: Health care professionals report that raising the health literacy marked the beginning of positive changes in the reproductive care of Roma women.

O41-1524
SERUM BISPHENOL A (BPA) CONCENTRATION IN PREGNANT WOMEN AND UMBILICAL CORD AND ITS IMPACT ON TESTIS DEVELOPMENT AND FUNCTION OF THEIR MALE NEWBORNS

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Problem statement: Epidemiological studies and clinical observations have found that male fertility has declined over the past few decades. Endocrine-disrupting compounds (EDCs) which are capable of modulating and disrupting the function of endocrine system have recently raised lots of concern. They can mimic or block natural hormones and there is a ubiquitous exposure of general population to EDCs, including pregnant women. Bisphenol A (BPA), a well-studied model of EDCs, as a xenoestrogen is widely used in manufacture of polycarbonate plastics, epoxy resins, dental sealants and can lining. It easily leaches out of cans, microwavable containers, dental sealants and polycarbonate bottles. Skakkenbaek in 2001 introduced a hypothesis that male infertility and male reproductive tract abnormalities may have the same cause. BPA can affect fetal testis during early prenatal development (certain critical window) and cause persistent changes in spermatogenesis and steroidogenesis. The fact that these changes are programmed so early during fetus development may explain why drug treatment of male infertility is ineffective. Studies on exposed animals and in vitro gave direct evidence that BPA can affect male reproductive development in dosages exceeding normal environmental exposure. Potential hazardous effect of BPA on pregnant women should be further and more precisely evaluated in the context of testis development, testicular gametogenesis and steroidogenesis of their offsprings. The question whether environmental BPA exposure can influence testis development and can cause male infertility in the future still remains open. **What did we do:** The aim of the study was to investigate whether Polish pregnant women and their male newborns are exposed to BPA and if so, to what extent. I also wanted to find a correlation between BPA in serum of pregnant women, umbilical cord and placental tissue. Moreover, I wanted to find if concentration of BPA in umbilical cord can influence the hypothalamus-pituitary-testicular axis. Blood from 117 mothers and 117 healthy male newborns was collected into BPA-free tubes and after centrifugation stored in -80C along with placental tissue placed in BPA-free tubes. Antropomorphic parameters were evaluated from newborn (anogenital distance, SPL, head circumferences, birth weight and length). The BPA level in serum, cord blood and placental tissue were measured using a liquid chromatography (LC200, Eksigent) and mass spectrometry (TripleTOF 5600+ [AB SCIEX, USA]). AMH, TGF – β2 and inhibin B were analyzed in sera from umbilical cord using Infinite M200 Pro microplate reader (Tecan, Switzerland) using commercial kits: (AMH Gen II ELISA [Beckman Coulter, USA], Inhibin-B EIA Kit [Sigma-Aldrich, USA], TGF-β2 [ELISA Kit, Sigma-Aldrich, USA]) according to the manufacturer`s protocols. Steroid hormones were measured using a liquid chromatography and mass spectrometry (LC-MS/MS 8040 [Shimadzu, Japan]). LH and FSH were analyzed using immunochemical analyzer Cobas e411 (Roche Diagnostic, USA) with commercial sets of reagents and according to the manufacturer`s instructions. **Results of the study:**

- Mother and newborn are exposed to BPA.
- Placenta binds BPA and probably reduces BPA's transport between mother and fetal compartment.
- BPA didn't correlate with maternal or fetal parameter or with steroids levels.

Implication of the study: My results confirmed mother exposure and utero exposure, but also suggested a protective role of placenta. My findings highlight the importance of further studies of the effects of BPA exposure on testis development. The research project was approved by ethical committee of CMKP and informed consent was obtained from each mother.

O42-1401
PREGNANCY OUTCOME AFTER RECENT LAPAROSCOPIC MYOMECTOMY – A CASE REPORT

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Problem statement: Uterine myomas are clinically observed in 20% to 25% of women of reproductive age. Reflecting the growing trend of delayed childbearing, the incidence of pregnant women with uterine myomas or who have undergone surgical treatment is gradually increasing. Leiomyomas are an infrequent primary cause of infertility and have been reported as a sole cause in a small percentage of infertile patients. Laparoscopic myomectomy (LSM) or abdominal myomectomy (AM) remains the most widespread treatment. Pregnancy after myomectomy may increase the risk of intrauterine adhesions, miscarriage (13%), preterm birth (10.4%), abnormal placentation, cesarean section and uterine rupture (0.6% if AM, 1.2% if LSM). Above all, uterine rupture during pregnancy is a cause of stillbirth, perinatal hypoxic brain damage, cerebral palsy, intrauterine fetal death (IUFD), and neonatal mortality (33%). The incidence of uterine rupture post myomectomy may vary per the size, type, location of the myoma, in addition to the suture technique used for myomectomy and the interval of subsequent pregnancy and myomectomy (ideally 2-year interval). **Methods:** We performed a clinical case retrospective review. **Results:** A.R.O., 38 years old, primipara, caucasian, with a spontaneous conception one month after laparoscopic myomectomy where an intramural fibroid measuring 5 x 7 cm located on the left side of uterine fundus was removed, with entrance to the uterine cavity. She had a history of primary infertility for 1.5 years. After adequate counselling and explanation of the potential risk of uterine rupture occurring during a pregnancy after myomectomy, the couple chose to continue the pregnancy. Regular check-ups were performed during first and second trimesters, without complications. At 28 weeks, she had an MRI for placental evaluation: myometrium indefiniteness in the left antero-lateral wall, suggesting a possibility of placenta acreta. She was admitted at 34 weeks for maternal and fetal monitoring with antenatal corticosteroid therapy for fetal maturation. A caesarean section was performed at 36 weeks, with the delivery of a healthy male new-born, weight 2520 gr, 10 months after laparoscopic myomectomy. Both infant and mother had no complications following delivery.
Conclusion: Myomectomy for intramural and subserosal fibroids may significantly improve the reproductive performance of women presenting with infertility. An appropriate time interval of 6-24 months between myomectomy and pregnancy is important as stated in the literature. Given the potential impact of uterine rupture to mothers and their fetuses, it is essential that obstetricians perform careful follow-ups for women, especially in the third trimester where most of the ruptures (80%) occur during the preterm period (between 28 and 36 weeks' gestation).

O43-1059
EMOTIONAL INTELLIGENCE IN WOMEN UNDERGOING INFERTILITY TREATMENT: IS THERE A RELATION WITH ETIOLOGY OF INFERTILITY?

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Study question: How is the "emotional intelligence" EQ among women undergoing assisted reproductive technologies and is there a link to their etiology of infertility? **Summary answer**: Total score of EQ was 3.45±0.51 with no relation to the etiology of infertility. **What is known already**: Several studies revealed that some people who have higher scores of emotional intelligences can better cope with problems, and able to adjust with the circumstances or better solve difficulties. **Study design, size, duration:** This was a cross-sectional study conducted on 250 women who referred to Royan Institute, a referral infertility clinic, Tehran, Iran. All women were undergoing assisted reproductive technology between October 15 and December 15 2016. **Participants/materials, setting, methods:** The final sample comprised 224 respondents (0.89.6% participation rate). The study tool was the Bar-On questionnaire with 99 items: and 15 subscales. **Main results and the role of chance:** The mean age of participants was 31.06±5.47. The mean score of women in problem solving was 3.97±0.73, in independence 2.73±0.59, in stress tolerance 2.98±0.54, in optimism 3.79±0.75 and in flexibility 3.97 ±0.46. A total mean score was 3.45 ±0.51. There was no significant difference between causes of infertility and total mean score of emotional intelligence. This no significant difference also was observed between each subscale and causes of infertility. **Limitations, reasons for causion:** Participants were self-selected and responses were self-report. It is not possible to participate all women who were undergoing infertility treatment and to administrate a web-based survey. This may affect the generalizability of results. **Wider implications of the findings:** Our findings indicated that all infertile clients need to have psychological interventions and counseling leading to upgrade their emotional intelligence in achieving success in treatment and adjustment with problem-oriented infertility. **Study funding/competing interest(s):** The study was funded by Royan Institute. No competing interests.

O44-1060
CONGENITAL MALFORMATIONS IN NEWBORNS AFTER ART

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Study question: Does neonatal outcome, including congenital malformations in children born after ART differ from children born after natural conception (NC)? **Summary answer:** In the literature, there is growing evidence that assisted reproductive techniques increase the risk of congenital malformations in infertile couples. **What is known already:** Regarding neonatal outcome as well as congenital malformations in children born after ART, studies are few, with limited sample size and heterogeneous findings. **Study design, size, and duration:** it was a retrospective study carried out on 5578 IVF/ICSI cycles in a referral infertility center, Royan Institue, in Tehran, Iran as well as 5840 NC data from a general hospital in Tehran and Tabriz Registry of congenital anomalies. This is state-specific information as a part of large study comparing 5 years Royan ART outcomes. **Participants/materials, setting:** The study group consisted of 3640 embryos transfer out of 5578 cycles in addition to all NC newborns. Maternal ages were 20 – 42 years for both groups. However, cycles resulted in No oocyte, No ET (embryo transfer), all freeze were excluded. Neonatal outcomes and congenital malformations were analyzed for term delivered singletons. **Main results and the role of chance:** A total of 5578 ART cycles performed in Royan infertility clinics. These cycles resulted in 3640 embryo transfers. Among cycles, the number of embryos transferred was 1-3 with respect to maternal ages and embryos quality. Sixty-three percent (2292 cycles) were failed and 37 %(1343 cycles) succeed which lead to 50% term delivery (667 infants). Among infants conceived with ART, 12% were born in multiple deliveries. After adjustment for maternal age, parity, family history and ethnicity, singleton infants born after ART had elevated risks for all outcomes. 2.55 %(17 infants) out of 88% singleton (586 infants) versus about 2.8% (p=0.33) in natural conception were suffering from various type of congenital anomalies. Overall, among infants conceived with ART, 27% (6 infants) had Cardiac disorders, 14% (3 infants) urinary tract disorders and 14% (3 infants) metabolic disorders. Other abnormities were observed in 45% remained population including muscular, visual, gastrointestinal, pulmonary and genetic disorders. However, the prevalence of pregnancies complicated by congenital anomalies for NC newborns including heart anomaly (2%), limb deformation (10.3%), spinal

muscular atrophy (2.5%), neural tube defects (22.6), chromosomal anomaly (2%) etc. was estimated 2.8 – 3.1 percent of total births in the region considering Iran Registry of Congenital Anomalies. **Conclusions:** assisted reproductive techniques could be a foremost risk factor for adverse pregnancy outcome in ART singletons such as heart anomalies (27% VS. 2%). However, patients conceived with ART procedures were at about same risk for several adverse obstetric and perinatal outcomes totally and there was no significant difference between these two groups.

O45-1205
RISK FACTORS FOR UNEXPECTED FOLLICULAR STAGNATION AND TREATMENT OUTCOME WITH LH SUPPLEMENTATION

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Problem statement: During controlled ovarian stimulation (COS), unexpected steady response, referred to as follicular stagnation (FS), may be encountered in 12-14% of normo-responder patients. There is paucity of data on the prevalence, risk factors and management of FS in unselected normo- and hyper- responder patient population. **Methods:** Retrospective cohort study. Inclusion criteria were: female age 40 yr-old, antral follicle count (AFC) ≥10, GnRH agonist or antagonist cycle and starting COS with recombinant-FSH (rec-FSH) only. Exclusion criteria were: azoospermia and pre-implantation genetic testing cycles. A total of 850 consecutive couples undergoing ICSI cycle due to unexplained (n=400), polycystic ovary syndrome (PCOS) (n=118), male-factor (n=255), and tubal-factor (n=79) infertility in-between January-2014 and January-2017 were enrolled with their chronologically first cycles. Rec-FSH was started at a dose of 150-200 IU/day in all cycles until the first monitoring visit on Day 6 of stimulation. A total of 74 (8.7%) FS cases were identified. Follicular stagnation was defined as i) estradiol (E2) 200pg/mL, and ii) no follicle 10mm by the 6th day of stimulation. Recombinant or urinary LH (75 IU daily) was supplemented as a routine policy when FS was encountered. Patients with no FS served as the control group. Ongoing pregnancy (12 week of gestation) was taken as primary outcome measure. **Results:** The overall prevalence of FS was 8.7%. Among the demographic features, only body-mass index (BMI) was significantly different between the FS and control groups. FS was significantly more common in PCOS patients [15.3%, p=0.02]. Despite statistically significant differences in some of the COS characteristics and embryological data, ongoing pregnancy rates per started cycle were comparable between the two groups (Table 1). When etiology of infertility, female age, BMI, duration of infertility, AFC, COS protocol, and starting rec-FSH dose were included in the logistic regression model, PCOS remained to be the only significant independent predictor of FS (OR= 2.5, 95%CI 1.1-5.4, p=0.017). **Conclusions:** Polycystic ovary syndrome is the only significant predictor for FS. Cycle cancellation is 2-fold more common with FS. When FS is encountered, with LH supplementation, despite longer stimulation (≈3 days), with less number of oocytes (≈2), ongoing pregnancy rates per started fresh embryo transfer cycles are comparable. However, the impact of FS on cumulative pregnancy rates should be further studied.

Table 1. Demographic features, cycle characteristics and outcome of the follicular stagnation (FS) and control groups.

	FS (n=74)	Control (n=776)	*P* value
Female age (yr)	29.6 ± 5.0	29.9 ± 4.6	NS
Body mass index (kg/m²)	28.3 ± 5.7	25.3 ± 6.5	<0.001
Antral follicle count	18.7 ± 8.0	19.2 ± 9.0	NS
Duration of stimulation (days)	11.6 ± 2.6	8.9 ± 1.4	<0.001
E_2 on trigger day (pg/mL)	1989.9 ± 1216.1	2716.6 ± 1369.5	<0.001
Number of oocytes retrieved	10.3 ± 5.0	12.8 ± 4.9	0.007
Number of embryos transferred	1.62 ± 0.5	1.56 ± 0.5	NS
Ongoing pregnancy per cycle n (%)	23/74 (31.1)	306/776 (39.4)	NS

NS: non-significant

O46-1240
EFFECTS OF AUTOLOGOUS PLATELET-RICH PLASMA ON ENDOMETRIAL EXPANSION IN PATIENTS UNDERGOING FROZEN-THAWED EMBRYO TRANSFER: A DOUBLE BLIND RANDOMIZED SHAM-CONTROLLED TRIAL

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Problem statement: Adequate endometrial growth is principal for implantation and pregnancy. Thin endometrium is associated with lower pregnancy rate in assisted reproductive technology (ART). Some frozen-thawed embryo transfer (FET) cycles are cancelled due to inadequate endometrial growth. The aim of this double blind randomized sham-controlled trial was to evaluate the effectiveness of PRP intrauterine infusion for treatment of thin endometrium. **Methods:** Between 2016 and 2017, a total of 30 patients who had a history of cancelled FET cycle due to thin endometrium (7mm) were randomized to PRP and sham-catheter groups. Hormone replacement therapy (HRT) was performed for endometrial preparation in all participants. PRP intrauterine infusion or sham-catheter was performed on day 11-12 due to thin endometrium and it was repeated after 48 h if necessary. **Results:** Endometrial thickness increased at 48 h after the first intervention in both groups. All participants needed second intervention due to inadequate endometrial expansion. After second intervention, endometrial thickness was 72.1±1.8 and 57.6±9.7 mm in PRP group and sham-catheter group, respectively. There was significant difference between two groups. (*p* value0.001) Embryo transfer was done for all patients in PRP group and just in three cases in sham-catheter group. Chemical pregnancy was reported in six cases in PRP group and one case in sham-catheter group.
Conclusion: Per this trial, it seems that PRP was effective in endometrial expansion in patients with persistent thin endometrium.

O47-1550
ULTRASOUND GUIDED EMBRYO TRANSFER: SUMMARY OF EVIDENCES TO CLOSE THE OPEN DEBATE AND UNLOCK NEW PERSPECTIVES. LITERATURE REVIEW AND META-ANALYSIS

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Problem statement: Despite the supposed advantages of ultrasound guidance during embryo transfer and the large number of clinical trials published on this topic, recommendations for use of this technique in daily clinical practice are still debated. The reasons may be related to some limitations that can be found in clinical studies and in published review. Trying to overcome these limitations, we designed a meta-analysis, basing exclusively on evidence from published RCTs, with the aim of analysing the impact of trans-abdominal ultrasound guidance during embryo transfer versus clinical touch and of trans-vaginal ultrasound guidance versus trans-abdominal approach on IVF outcomes. Moreover, we provide an extensive systematic review in order to collect and analyse all strengths and limitations of today's techniques for embryo transfer and to unlock new future perspective. **Methods:** This is an updated systematic review and meta-analysis aimed to assess a body of evidence concerning the use of US guidance for ET and to provide an appraisal of future perspectives in US guided ET techniques. The present study consists of three major sections according to different outcomes: In the *first section,* we performed a meta-analysis of all published RCTs comparing the effects of transabdominal(TA)-US guided ET and clinical touch(CT) ET on IVF outcome. In the *second section*, we meta-analyzed data from RCTs comparing the results of transvaginal(TV)-US guided ET versus TA-US guided ET. In the *third section*, we conducted an extensive qualitative analysis of all available trials (independently from study design) evaluating comparisons between different US guided ET techniques. (TA-US versus CT, TA-US versus TV-US and 2D-US versus 3D-US). **Results:** Basing on 14 randomized trials, we found moderate quality of evidence supporting beneficial effects of trans-abdominal guidance application during embryo-transfer versus conventional clinical-touch in term of both clinical pregnancy rate (1.48;

95% CI: 1.29-1.71; p0.00001; I^2=0%) and ongoing/live birth rate (OR 1.64; 95% CI 1.35-1.99; p0.00001; I^2=0%). We did not found significant differences in term of miscarriage and ectopic pregnancy rate, even if evidences are of low and very low quality respectively. Concerning trans-vaginal versus trans-abdominal approach, basing on 3 randomized trials, we found low quality of evidence supporting equivalence of these techniques in term of clinical pregnancy rate (OR 1.05; 95% CI 0.76-1.43; p=0.78; I^2=0%) and ongoing/live birth rate (OR 1.19; 95% CI 0.86-1.64; p=0.30; I^2=0%). **Conclusion:** Considering that ultrasound scan is a wildely available and cost-effective tool in gynecology and human reproduction, its routine intruction during ET appears to have more benefits than criticisms and should be reccomeded in clincial practice of fertility care providers. Further large RCT are needed, instead, to better understand strenghts and weknesses of this technique on events at a lower frequency like ectopic pregnancy rate. Finally, further large RCT are mandatory to explore the possbile benefits of new tool like TV-US and 3D-US.

O48-1248

ELEVATED LEVEL OF AFAMIN AND LIPID DYSREGULATION IN SEMINAL AND FOLLICULAR FLUIDS COULD BE RELATED WITH MALE AND FEMALE INFERTILITY

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Introduction: The plasma glycoprotein afamin has been previously identified and described as an alternative carrier protein for vitamin E in extravascular fluids such as plasma, ovarian follicular and seminal fluids. FVB/N mice overexpressing human afamin were demonstrated higher concentrations of total cholesterol and triglycerides in plasma in comparison with sex-matched wild-type animals. However, for this moment we did not observed any study which could establish relationship between the levels of afamin and infertility in women and man. **Objective:** The aims of this study were to assess the level of afamin in serum, seminal and follicular fluid of infertile men and women comparing with healthy controls and to study the association between the single nucleotide polymorphisms (SNPs) of the 5`-untranslated region (5`-UTR) of afamin gene and infertility. **Material and methods:** In this study were included semen samples from 20 patients attending the Andrology Laboratory in Clinica Tambre who were then divided into two groups per WHO 2010 criteria: asthenozoospermia (Asz) (n = 6) and oligoasthenoteratozoospermia (OATz) (n = 14). A control group consisted of 39 men with normal semen parameters. Follicular fluid (FF) were obtained from 14 patients 35 years, low responders (LR) (≤ 5 oocytes retrieved) undergoing IVF, and 40 healthy fertile oocyte donors, both with the same ovarian stimulation protocol. Concentration of afamin was quantified by sandwich-type ELISA. Peripheral blood samples were analyzed for the presence of specific sequences of Afamin gene (AFM) by PCR amplification followed by direct sequencing. The levels of total cholesterol, triglyceride (TG) and non-esterified fatty acids (NEFA) were determinate by commercial kits. T-Student test was used to verify normality of distribution of the variables. One-way-ANOVA was used to compare the difference among three groups. **Results:** Subjects with low sperm motility or/and sperm concentration had higher median sperm afamin concentrations (18,9±2,9 ng/mg of proteins) and serum afamin concentrations (24,1±4,0 ng/mg of proteins) than did those without sperm alterations (10,6±1,4 ng/mg of proteins) (p0,02); (15,6±1,4 ng/mg of proteins) (p0,002). In the group of patients, the levels of TG and NEFA in seminal fluids and TG in plasma were significantly elevated as compared with control group. Afamin concentration was significantly higher in FF of patients with LR (20,4±2,3 ng/mg of proteins) than in control group (13,2±0,4 ng/mg of proteins) (p0,05). No statistically significant differences were observed between afamin levels in serum of young women with LR (17,2±1,5 ng/mg of proteins) and oocyte donors (14,4±0,5 ng/mg of proteins). Concentrations of follicular fluid NEFA, TG and serum NEFA were significantly higher in young women with LR compared with oocyte donors. A new transversion (A/T) (position 4:73481093) was identified in an OATz patient and was associated with high levels of afamin in plasma and seminal liquid. 5`Upstream single nucleotide polymorphisms rs115041046, rs371710441, rs35680917, rs72856618 of AFM were polymorphic in both patient and control groups. However, our data showed that AG genotype (rs115041046) was higher among patients compared with control group, and TA genotype (rs371710441) was predominant in the group of male patients. **Conclusions:** Afamin levels in the patient group are superior to the control group probably due to a compensatory mechanism caused by a possible decrease in vitamin E levels and an increase in oxidative stress. Our results suggest that afamin genetic variations might be associated with male and female infertility.

O49–1478

PLACENTAL MICRORNA EXPRESSION IN PREGNANCIES COMPLICATED BY GESTATIONAL DIABETES MELLITUS AND PREECLAMPSIA

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Background and aims: According to current data the incidence of gestational diabetes mellitus (GDM) increased dramatically throughout the world. Relevant studies of GDM origin and its pathogenesis are of great clinical and scientific values taking into account an intimate association of GDM with serious perinatal complications including preeclampsia, preterm labor, fetal macrosomia as well as long-term effects such as a high risk of metabolic syndrome and diabetes mellitus type 2. The aim of study was to determine feasible changes of placental miRNAs expression profiles revealed by next generation sequencing (NGS) in pregnancies with GDM complicated or not with PE. /h5 **Methods:** The study was performed on placenta samples from four groups of women: patients with GDM (n= 2), PE (n=4), GDM with PE (n=4) and with normal pregnancies (n=6). miRNA expression profiles in placentas were investigated using an Ion Torrent sequencing system. Sequencing data were processed using a comprehensive analysis pipeline for deep miRNA sequencing (CAP-miRSeq). Statistical analysis was performed with Statistica 10.0 (StatSoft, Inc., Tulsa, OK, USA). **Results:** Out of 27 miRNAs, studied expression was significantly different (FDR0.05) only in his-miR-451a.the comparative analysis of the expression profiles of miRNAs in the GDM placentas and PE placentas revealed reliable differences in the expression of hsa-miR-4532 (p 0,0001 FDR = 0.0008), hsa- miR-34c-5p (p 0,0001, FDR = 0.0083), and hsa-miR-193b-5p (p 0,0001, FDR = 0.0139) in pregnancy complicated by PE, without of GDM. **Conclusions:** The present results suggest that GDM and PE are associated with specific alterations in the placental miRNA expression profiles. Further studies are needed to verify the role of these microRNA in molecular mechanisms underlying GDM and PE pathogenesis.

O50-1584

LAPAROSCOPIC PERITONEAL VAGINOPLASTY (LUOHU II PROCEDURE) IN MRKH SYNDROME: 10 YEARS' EXPERIENCE IN 885 PATIENTS

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Problem statement: Numerous nonsurgical and surgical techniques have been described for the creation of a neovagina in patients with Mayer–Rokitansky–Küster–Hauser syndrome (MRKH syndrome) which suggests there is no single superior surgical technique. This study aims to demonstrate that a novel laparoscopic peritoneal vaginoplasty (Luohu II procedure) provides adequate anatomic and functional outcomes in terms of stable length over time and sexual function in one of the largest cohort studies of patients with MRKH syndrome. **Materials and methods**: From January 2007 to December 2016, a total of 885 patients with MRKH syndrome underwent Laparoscopic peritoneal vaginoplasty (Luohu II procedure). Randomly selected frequency-matched age-comparable healthy women were serving as controls (n =653). Intraoperative parameters, postoperative parameters, and anatomical outcomes were recorded. Sexual satisfactions were assessed by the Female Sexual Function Index (FSFI) questionnaire and were compared with the controls. **Results:** Laparoscopic peritoneal vaginoplasty (Luohu II procedure) was successfully performed in all 885 patients. The mean operative time and intraoperative blood loss were, respectively, 57.4±20.5 minutes and 13.0±9.7 ml. During median follow-up for 28 (range 8-96) months, mean functional neovaginal was 9.9±0.6 cm, including those who had no sexual intercourse. Vaginal biopsy showed complete epithelialization of vaginal mucosa. At 12 months after surgery, functional success, as assessed by the FSFI questionnaire, was achieved in 96.7% of patients. The FSFI scores did not differ significantly between patients with MRKH syndrome and controls. No common long-term complications occurred. **Conclusions:** To the best of our knowledge, this study is the largest cohort study of patients with MRKH syndrome. Our technique (Luohu II procedure) creates a neovagina of adequate size and secretory capacity for normal coitus, the procedure may be regarded as a fast, effective and minimally

traumatic technique that has satisfactory anatomical and functional outcomes for patients with MRKH syndrome.

O51-1585
CLINICAL ASPECTS OF MAYER-ROKITANSKY-KUSTER-HAUSER SYNDROME IN A CHINESE POPULATION: AN ANALYSIS OF 885 PATIENTS

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Problem statement: Mayer-Rokitansky-Kuster-Hauser Syndrome (MRKH; OMIM 27700) is characterized by congenital aplasia of the uterus, cervix, and upper two-thrids of the vagina during fetal development. The incidence of the syndrome is 1/4500 female newborns. The aim of this study was to use the VCUAM classification system to describe the spectrum of congenital malformations in a large cohort of 885 patients affected by MRKH syndrome. **Materials and methods:** From January 2007 to December 2016, a total of 885 patients with MRKH syndrome characterized by primary amenorrhea were treated in the Department of Obstetrics and Gynecology at the University Hospital of Shenzhen (China). Clinical examinations, abdominal or perineal/rectal ultrasound, magnetic resonance imaging, hormonal profile, karyotype and laparoscopy were collected. **Results:** We identified associated malformations in 98 out of 885(11.1%) cases of MRKH. The 885 patients could be grouped into hormonal phases: 53.7% follicular, 35.2%luteal, and 11.1% ovulatory. The major karyotype of MRKH patients was 46, XX; abnormal karyotypes were found in 3 cases. **Conclusion:** A lower proportion of associated malformations were found compared to current literature (Oppelt 2012; Rall 2015), renal anomalies were the most frequent associated malformations, and most of the patients presented with normal karyotype. Given the large cohort of this study, the lower malformation rates might be due to geographic or referral patterns and that further investigation is warranted.

O52-1376
CERVICAL LENGTH MEASUREMENT IN NON-PREGNANT WOMEN – ARE WE OVERDIAGNOSING SHORT CERVIX IN PREGNANCY?

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Problem Statement: As far as we know, there are no percentile curves of cervical length defined for the non-pregnant population. Our objetive is to define the percentile curves of cervix length in non-pregnant women, as well as the clinical factors that influence its size. Defining these curves will help to understand if the short cervix cutoff (25 mm) used in the pregnant population in our institution is acceptable, given the 10th percentile of the cervical length found in our non-pregnant population. **Methods:** Retrospective study, conducted between January and June 2017, which included all women undergoing gynecological ultrasound in the Ultrasonography Unit of a tertiary hospital. The clinical data of the included women were obtained through the consultation of their clinical process. **Results:** A total of 1591 women were included, with a mean age of 48.5 years (SD 14.4 years). Of the women included, 65.7% (n=942) were premenopausal and 34.7% (n=492) postmenopausal, 20.2% (n=293) were nulliparous, 28.2% (n=409) were primiparous, 41.6% were multiparous (n=748), and 27.7% (n=286) of the women had at least one cesarean delivery. Regarding the gynecological history, only 1.9% (n=27) had previous conization. The median cervical length is 27 mm (10th and 90 th percentiles are 21 and 33 mm respectively). Excluding postmenopausal women, the median cervix length is 28 mm (10th and 90 th percentiles are 23 and 34 mm respectively). There are statistically significant differences in the length of the cervix between premenopausal and postmenopausal women (median 28.4 vs 25.1 mm, p=0.002), nulliparous and multiparous women (median 26.4 vs 27.4 mm, p0.001), women with previous caesarean section and without previous cesarean (median 28.8 vs 27.3 mm, p0.001), and women with previous conization compared to women without cervical surgery (median 28.8 vs 27.3 mm, p0.001). Age also seems to influence the length of the cervix, with the length of the cervix increasing in women up to 50 years of age and progressively decreasing from that age, which agrees with a higher prevalence of preterm delivery in very young women (40 years). **Conclusion:** The 10th percentile of the uterine cervix length found in our non-obstetric fertile population (23 mm) was lower than the cutoff used in portuguese pregnant women (25 mm). In addition, statistically significant differences were found in different variables (menopause, parity, previous cesarean section and conization). However, although there are statistically significant differences individually in these variables, the differences seem to be too small to be clinically significant, given the interobserver variability in the measurement of the cervix. Besides that, cervix is a dynamic structure, that is likely to suffer physiologic changes during pregnancy, which makes it difficult to compare the results. Further studies are needed to support these findings, preferably by comparing the measurement of the cervix in the same population of women before and during pregnancy.

O53-1400
STILLBIRTH ANALYSIS: A 10-YEAR RETROSPECTIVE STUDY IN A PORTUGUESE MATERNITY

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Problem statement: Stillbirth is a major but often overlooked public health problem, as it is a key outcome indicator of gestational and intrapartum care. The implementation of protocols to identify the associated causes and risk factors is necessary to establish prevention strategies and reduce fetal mortality rates. The aim of the current study is to review, analyse and classify the cases of stillbirths (after 24 weeks of gestation) that occurred from 2007 to 2016 in a Portuguese maternity. **Methods:** Data from all the cases of stillbirths that occurred in our hospital between 2007 and 2016 were retrospectively collected and analysed. ReCoDe classification was applied to identify relevant conditions present at the time of fetal death. As defined by Gardosi, the primary condition categorised should be the highest on the list of the ReCoDe classification. Fetal growth restriction was defined as a birthweight below the 10th percentile. **Results**: During the 10-year studied period, there were 78 stillbirths from a total of 27793 births. The mean stillbirth rate (SBR) was 2.81 per 1000. This rate was highest in 2009 (SBR 4.87‰) and has been declining since then (SBR in 2016: 1.62‰). The mean maternal age was 27.5 (range 17-45) and 55.1% of the pregnant women were *primigravidae*. In 13 cases, women had history of previous pregnancy loss or neonatal death and 28.2% had relevant previous medical history, notably diabetes mellitus and chronic hypertension. Of the total of 78 cases studied, 44.9% had pregnancy surveillance at primary health care, 32.1% in our hospital and in 4 cases the pregnancy was previously unknown. In 10.7% of the cases gestational diabetes was diagnosed and 13.3% developed gestational hypertensive disorders. In terms of gestational age, 30.8% occurred between 24 and 28 weeks of gestation, 12.8% between 29-32 weeks, 26.9% between 33-36 weeks and 25.6% at term. Autopsy and placental examination were performed in all cases. Per ReCoDe classification, the most frequent primary conditions associated with stillbirth were fetal growth restriction (category A7: 26.7%), *abruptio placentae* (category C1: 16.7%) and placental insufficiency/infarction (category C4: 11.5%). In 9.0% of the cases, no relevant condition was identified and in 6.4% a lethal congenital malformation was diagnosed. In the fetal growth, restricted subgroup, the most common underlying condition was placental insufficiency/infarction. **Conclusion:** Measurement of the outcome of care is crucial to the development of safe and high-quality healthcare services. ReCoDe classification system has the advantage of highlighting the important association between fetal growth restriction, placental insufficiency/infarction and stillbirth. Per these findings, the prompt diagnosis of fetal growth restriction is of major importance in the prevention of stillbirth. Continuous research on placenta pathology could be an important tool to further reduce fetal mortality.

O54–1409
EXPERIENCE OF SIGMOID COLON VAGINOPLASTY IN VAGINAL AGENESIS WITH FAILURE OF PREVIOUS SURGICAL PROCEDURES

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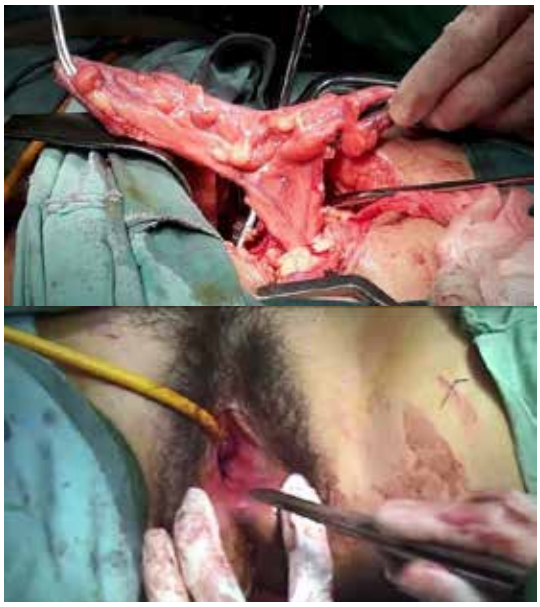
Problem statement: The use of sigmoid colon vaginoplasty has been shown to have excellent results with natural lubrication and without the need for regular dilatation. The procedure is expected to have more advantage in patient with failure of previous other surgical procedures. **Methods**: A retrospective study was conducted in patients who underwent sigmoid colon vaginoplasty for vaginal agenesis at Dr. Sardjito Hospital, Yogyakarta, Indonesia in 2017. The medical records were reviewed for medical history, surgical technique, complications, and outcomes. The procedure was performed using laparotomy approach. A longitudinal incision was made in median line from suprapubic area until umbilicus. About 10-15 cm segment of sigmoid colon was resected with preservation of feeding artery from the branch of sigmoid artery. The remaining colon related to end to end anastomosis using 2-0 absorbable suture. The rectovesical tunnel was produced by making incision in vaginal vestibule posterior to the urethra and then extended using bouginage until it reaches the peritoneal cavity. The distal sigmoid graft was mobilized through the rectovesical tunnel and the edges were sutured to the vaginal pit using 2-0 interrupted absorbable sutures. A 2-cm longitudinal incision was made in the lower part of uterus and connected to the proximal part of sigmoid graft with end to side anastomosis using 2-layered interrupted 2-0 absorbable suture. The lumen of the sigmoid graft was packed with gauze pieces for 48 hours postoperatively. **Results**: There were 2 cases of complete vaginal agenesis in 2017. Both patients were 21 years old and previously underwent McIndoe vaginoplasty in combination with amnion graft. Both patients experienced recurrent blockage of neovagina and underwent hematometra drainage and recanalization surgery one time (patient A) and four times (patient B). During surgery, the length of the sigmoid graft was 15 cm in patient A and 12 cm in patient B. The longitudinal incision in the uterus were made in the right lateral part in patient A and in the posteroinferior part in patient B. Parenteral nutrition was given for 5 days' post operation. Patients were discharged after 7 days' hospitalization. Patients were educated to maintain sanitation in external genital area and return to the hospital once a month for follow up. There was no major complication during hospitalization and postoperative period. Both patients had experienced menstruation twice, with normal flow and duration and without dysmenorrhea. A slightly excessive mucus discharge was experienced in the first month but it disappeared in the second month. Neovagina was cosmetically acceptable to the patients. The edge of sigmoid colon graft and vaginal pit had fused. Sexual function cannot be assessed because both patients had not yet married. From ultrasonography, the apical part of neovagina had lumen size of 3,5x2 cm, the lumen of the neovagina which attached to the uterus had diameter of 1,7-1,9 cm, and the lumen of the distal neovagina had diameter of 1,5 cm. Both patients were comfortable with the surgery result and had more confidence because of the normal menstruation. **Conclusion**: Sigmoid colon vaginoplasty is a safe and effective procedure for vaginal agenesis with failure of previous other surgical procedures. It has good cosmetic results, low complications rate, and high acceptability.



O55-1096

COMPARISON OF SUFFICIENT AND INSUFFICIENT VITAMIN D IN TREATMENT OF INFERTILE PCOS PATIENTS

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Problem statement: Vitamin D deficiency is common in women with polycystic ovary syndrome (PCOS). 67–85% of women with PCOS having serum concentrations of 25-hydroxy vitamin D (25OHD) Some evidence is suggested that vitamin D deficiency has a role in incidence of PCOS patients. The aim of this study is to assess the effect of sufficient and insufficient levels of vitamin D on treatment of PCOS infertile patients. **Methods:** In this clinical trial, 60 PCOS infertile patients referred to Dr. Rasekh clinic that randomly divided in case and control groups. Each of these two groups were randomly divided into case and control groups (15 participants in each group). Data collection was performed via questionnaires by midwives and statistical analysis by SPSS 21. **Results:** There was a significant relationship between follicular size and use of vitamin D (P 0.05). Increased endometrial thickness and reduced BMI was detected in using vitamin D groups. The overall pregnancy rate was twenty (66.7%) that was related to using vitamin D groups. **Conclusion:** Vitamin D has a positive effect on the treatment of PCOS patients. Although response to the treatment is better in patients with insufficient vitamin D levels, but prescription of this vitamin in patients with sufficient vitamin D level is also effective. Per rare side effects related to this vitamin, its low cost and toxicity, we recommend adding 1000 units of vitamin D3 daily to drug regimen of infertile PCOS patients.

O56-1461

KNOWLEDGE AND TECHNOLOGY TRANSFER OF EXPANDABLE SQUEM TECHNIQUES IN MICROSURGERY OF MALE INFERTILITY FROM HIGH-COST TO LOW-COST CLINICAL HUBS

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In the last COGI Congresses in Paris (Paris, France, November 17-20, 2011, A6), in Hainan (Hainan, China, December 8-11, 2011, A27) and in Singapore (Singapore, July 19-22, 2012), the principles of MARS – Male Reproductive Surgery and MicroSurgery have been described in their fundamentals, based on the historical issues and on the new collective intelligence and knowledge in implementing Innovation technologies in Human Reproduction and Family Welfare. The Challenges in Male Reproductive Surgery - MaRS to preserves or enhances Male Fertility are strictly dependent on the Innovation Technologies implemented on (TREMS – Technology for REproductive Medicine and Surgery). Expandable Surgery is a New Frontier in Applied (Bio)Technologies for Surgery: it combines Innovation Technologies (Medical Smart Systems) with Advanced BioTechnologies for Regenerative and Reparative Medicine: Expandable BioSurgery. The new MIMIS Techniques, developed by our Team, called MIVAS, MIRES, IRMIS, TAS, MIRMAC, have been applied through a pilot multi-centric trial with a monitoring period of three years in so-called intermediate and low cost CMM-MIR Hubs in Italy, Hungary, Albania and India, to demonstrate the potential widespread application of MIMIS supported by high technological content - to preserve, restore and enhance Male Fertility Power -. MIVAS – Male Infertility Vascular Surgery, MIRES – Male Infertility Reconstructive Surgery, IRMIS – Infra Red Male Infertility Surgery, TAS – Testis Augmentation Surgery, MIRMAC –Microsurgery Reversible Male Contraception based on RISUG Adv., represent a Core of new Microsurgical Techniques supported by Innovative Technologies for Surgery in Male Factor. On Human Testis Expandable BioSurgery (TEBS) is combined with expandable MicroSurgery (TEMS) in Real-time in the OP. The SQEM – Sperm Quality Enhancement MicroSurgery Techniques and Procedures focalize on the Main Goal to Improve the Morphofunctional Parameters of Sperm and the Gonads Power in TIS – Testis Insufficiency Syndrome. The Global Evaluation of SQEM Techniques has been scored in terms of 1. Learning Curve Surgical Training (LEC) for the Microsurgical Operators as Professional Coaching, 2. Impact on the Male Factor (IMF) and Cost-Benefit Ratio (C/B) in the Holistic Approach of Infertile Couples using HIA – Health Impact Assessment

Procedures and Standards. Surgical Expertise and Skillfullness, Clinically Evaluable Male Factor Restoration and Improvement and Social Economy Benefits are reported comparing and addressing Human Reproduction and Family Welfare Policies in these Countries.

O57-1531
THE RATES OF PRECONCEPTION CARE IN TURKISH PREGNANT WOMEN, AFFECTING FACTORS AND THE QUALITY OF CARE

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Problem Statement: Preconception care is the provision of biomedical, behavioural and social health interventions to women and couples before conception occurs. It aims at improving their health status, and reducing behaviours and individual and environmental factors that contribute to poor maternal and child health outcomes. The aim of the study was to estimate the rates of preconception care in Turkish pregnant women, the affecting factors and the quality of care. **Methods:** The cross-sectional study was carried out in the clinics of Department of Obstetrics and Gynecology of a State Hospital in the east of Turkey between February 2017 and July 2017. Between the dates mentioned, 1050 pregnant women who applied to the related clinics, accepted to participate in the research and became pregnant without taking any infertility treatment became the samples of the study. A "Survey Form" prepared by the researchers in accordance with the literature information was used in the collection of the data. **Results:** It was found that 30.9% of the pregnants included in the scope of the study were between the ages of 25-29 and 27.5% of them were primary school graduates. 31.1% of them were primigravida and 79.5% of them were pregnant by willingly-planning, and 89.1% of them had regular antenatal care. The received preconception care rate was 17.3% (182 women), and it was found that the ages of the pregnant women, the employment status, the level of education of the spouses and themselves, the place where they lived, the economic status, the number of pregnancies, the demand of pregnancy and regularity of the antenatal care were the factors affecting preconception care. When the quality of the received preconception care was examined according to the information provided by the pregnant women; From the components of the preconception care, it was identified that the order of the most frequently asked topics of the risk assessment component are; The ages of the mother and father (68.1%) in the evaluation of socio-demographic risks, past pregnancy status (91.8%) and delivery status (84.1%) in the evaluation of the reproductive system, the presence of a systemic disease such as DM or HT (%74.2) in the evaluation of medical and surgical risks, the presence of a drug that must be used consistently (63.7%) in the evaluation of teratogenic drug use, the presence of a contagious disease (47.8%) and tetanus vaccination (33.5%) in the evaluation of the infectious diseases and immunization status, consanguinity with husband (72%) in the evaluation of risk of inherited diseases, the status of smoking and alcohol consumption (64.3%) in the evaluation of substance abuse and environmental risks, blood tests (96.2%), urine test (92.3%), and ultrasonography (94.5%) for assessment of risks related to physical examination and laboratory findings. It was determined that the folic acid tablets (85.2%) were prescribed the most in the antenatal health supplement component, which is one another constituent of the preconception care. **Conclusion:** The rate of preconception care in pregnant women was very low, and it was determined that pregnant women who were between age of 25-29, employed, university graduate, living in the city center, having good economic status, has their first pregnancy, were willingly planning their pregnancy and receiving regular antenatal care received more preconception care than other pregnant women. It can be said that the quality of received care was moderately good.

O58-1276
SECONDARY AMENORRHEA AS A SYMPTOM OF HEREDITARY HEMOCHROMATOSIS (HH)

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Problem statement: In the cases where hereditary hemochromatosis (HH) is presented with a secondary amenorrhea as a symptom, gynecologist is the the first doctor patient goes to, and rare disorders that are cause of amenorrhea such as HH, can be easily overlooked. Hereditary hemochromatosis (HH) is an autosomal recessive disorder where the mutations in the HFE gene or, rarely, other genes (hemojuvelin, hepcidin, ferroportin or ceruloplasmin genes) result in increased intestinal iron absorption causing iron overload which is not regulated by iron stores. In cases where HH is presented with a secondary amenorrhea, gynecologist is the first doctor patients are referred to, and rare disorders that are the cause of amenorrhea such as HH, can be easily overlooked. Retained iron deposits in parenchymal cells with the accumulation reticuloedothelial cells occur very late in the disease. At the critical point of overload, patient becomes symptomatic with clinical manifestation of iron accumulation such as liver function abnormalities, skin hyperpigmentations, diabetes mellitus, arthralgia, impotence among male patients and electrocardiografic abnormalities. Symptoms typically begin after the age of 40 among males and even later among females' due to the extra iron loss caused by menses, pregnancy and lactation. As there is an excess iron deposition in pituitary cells, tropic hormones serum levels are reduced, leading to hypopituitarism. Iron accumulation is mostly in the anterior pituitary, while the involvement of the posterior portion is rather rare. Secondary hypogonadism is the most common endocrine abnormality in HH. **Methods and results:** We present a case of 38-year old Caucasion woman, G2P2 who was admitted to our OG department with the 1,5-year old amenorrhoea and strong headaches. Patient's history revealed only hypothyreosis treated with Levotiroxin for the last two years. Laboratory test showed very low gonadotropin serum levels-LH- 0,7 IU/L, FSH- 0,8 IU/L, estradiol 44 pmol/l, testosterone 0,4nmol/L, prolactin 71mIU/l and cortisol 27 nmol/L. Ultrasound examination was inconclusive with a thin endometrium measuring 3 mm and inactive ovaries. Due to these findings, MRI of pituitary and selar region was performed to exclude tumor and it showed no abnormalities except lower pituitary contrast uptake. Radiology specialists were consulted regarding these MRI findings and HH was suspected to be our patient's diagnosis. Further laboratory tests revealed high serum levels of feritin-3153 µg/L, while OGTT test discovered diabetes mellitus with serum glucose levels of 5,7/13,3. Genetic tests were performed and they have shown no HFE gene mutation. Liver enzymes were elevated and liver biopsy was performed showing precipitation of hemosiderin pigment. **Conclusion:** Once the diagnosis of HH was confirmed, patient was treated with venepuncture and with sequential combined hormone replacement therapy (estradiol/norethisterone acetate) for hypogonadic hypogonadism. The aim of this paper is to show that, even some common symptoms in gynecology like amenorrhoea, can be related to some rare disease. Hence, in these cases a multidisciplinary approach is advised to establish a proper diagnosis, care and therapy.

O59-1472
DOES BARIATRIC SURGERY IMPROVE ASSISTED REPRODUCTIVE TECHNOLOGY OUTCOMES IN OBESE INFERTILE WOMEN?

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Problem statement: Little is known about the impact of bariatric surgery on obese infertile women seeking an assisted reproductive technology. **Methods:** All obese women with a history of assisted reproductive technology (ART) failure that underwent ART treatment cycles both prior to and following bariatric surgery were included. ART outcomes were compared evaluating the duration and dose of gonadotrophins used; the measurement of day 3 FSH; the anti-mullerian hormone dosage; the number of follicles 15 mm; the number of retrieved and fertilized oocytes; the number of metaphase II, metaphase I and germinal vesicle oocytes; the number of embryos obtained; the number of top-quality oocytes and embryos; the number of transferred embryo; the pregnancy rate and the live birth rate. **Results:** Forty women were included. The total number of gonadotropin units required and in the length of stimulation following bariatric surgery decreased ($p = .001$), with an increase of the number of follicles ≥15 mm ($p = .005$), of retrieved oocytes ($p = .004$), of top-quality oocytes ($p = .001$) and metaphase II oocytes ($p = .008$). More oocytes were fertilized in ART cycles following bariatric surgery (4.2 ± 1.7 vs 5.3 ± 2.4; $p = .02$). After surgery, we have registered also a better number of top-quality embryos (0.5 ± 0.6 vs 1.1 ± 0.9; $p = .003$). Pregnancy rate following the bariatric surgery increased to 15/40 (37.5%) (p .001), and live birth rate (LBR) increased to 14/40 (35%) in the post-surgery group (p. 001). **Conclusion:** Our results provide the rationale to consider weight loss surgery one of the better ways to improve the results of ART treatment in obese infertile women. Bariatric surgery is confirmed to be one of the most useful interventions to obtain weight loss. Furthermore, bariatric surgery is demonstrated to be safe and effective in increasing the outcomes of ART treatment and on top the pregnancy and the live birth rate.

O60-1084
BIOSIGNALS: THE WAY OF CONTROLLING THE EMOTIONAL STATE DURING INFERTILITY TREATMENTS

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One of the main issue with high impact during infertility treatment is the emotional state of the patients, specially stress. The body responds to stress releasing cortisol, which is produced from the supra-renal glandules. The stress activates the hypothalamus-pituitary-adrenal system, responsible by releasing corticotrophin and, consequently, adrenocorticotrophic and glucocorticoids by the adrenal cortex. The released hormones may affect the reproductive function. This impact results from the hypothalamus-pituitary-gonadal, inhibiting the secretion of the gonadotrophin and, consequently, interfering into FSH and LH. As consequence, the stimulating effect of gonadotrophin into the sexual steroids secretion is changed. Furthermore, the cortisol and progesterone compete by the same receptors, being cortisol preferred rather progesterone. This occurs because the body is being prepared for a surviving state “Fight and Flight”. The antagonistic activity of central nervous system ensures homeostasis of the body through the sympathetic nervous system responsible for acceleration of physiological processes and the parasympathetic nervous system which decreases the rate of these processes. These changes not only are reflected in the individual`s behaviour, but also in changing the biosignals: breathing, heartbeat, skin conductance, muscle activity or body temperature. Physiological parameters can assist in the analysis of the variation of an emotional state. To monitor the emotional state of the patients is crucial during the infertility treatments. No solutions have been presented for providing: 1) patients with real-time feedback about their emotional states and 2) physicians with some indicators. Thus, we present a new methodology using a biosignal and portable device for helping the patient in relaxing and to provide the physician with emotional indicators that may impact the success of the treatment. Our proposal uses skin conductance (SC) sensor to help the patients in training brains for relaxing. SC sensor allows measuring the electrical conductance of the skin controlled by the automatic nervous system. The skin conductance response (SCR) is a physiological indicator for measuring degree of arousal. If the arousal increases, the “fight or flight” response of the autonomic nervous system comes into action and adrenaline causes increased sweating, which is instantly measured. Our methodology consists of stimulating the patient with a relaxing song. Patient just needs to place the sensor in hand and connect to the Bluetooth unit. Unit will send, in real-time, raw signal to the computer, which will present signal in real-time to the patient. The steps are the following:
1) No song should be played during the first minute. This minute will provide the SCR baseline.
2) After one minute, song should be played and two situations will occur: a. SCR will increase in the favourite parts of the patient; b. At the end, SCR should decrease faster because patient is relaxed.
3) Steps 1 and 2 should be repeated three more times and after that, SCR of the patients should be lesser than the SCR baseline, extracted in the step 1.
4) Steps 1, 2 and 3 should be daily repeated to train the patient brain for relaxing.
Data is stored into the cloud, and physicians and patients can access the emotional state indicators and monitor the patient progress. We believe that this methodology can be useful during the infertility treatments with high impact in its success.

O61-1583
CHANGING PARADIGM FOR SUCCESS IN ART FROM PR IN FRESH CYCLE TOWARDS CUMULATIVE PR 8% INCREASE OF CUMULATIVE PR WITH EVERY ADDITIONAL EGG BY OPTIMIZING FLUSHING TECHNIQUE

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The trigger for this paper is a publication, published in Fert. Ster. Febr. 2017 (1) with main message, that we can increase our Cumulative Pregnancy Rate (Fresh plus Kryo Cycle) in IVF by 8% with every additional egg, which we harvest. There is no doubt, that Egg Collection is a crucial step in IVF. Unfortunately, we have no Guide Lines for this important procedure. Approx. 20% of IVF Centers worldwide are using Double Lumen Needles for OPU. 80 % Single Lumen Needles. The argument, not to flush follicles is frequently: “I do not believe in flushing, because the number of eggs are the same as with flushing, therefore flushing would be waste of time”. The reason for this phenomenon is not flushing per, but insufficient physical properties of a DL Needles on the market. The answer for this question has Poiseuille`s law. As soon as we increase the inner diameter of a needle out of 19%, the aspirated volume is doubled. In a DL Needle, the flow volume would decrease more than 50% together with remarkably reduced turbulences during both, aspiration and flushing as well due to narrowed inner lumen. The physical properties of STEINER-TAN Needle in 17, 19, 21 gauges for flushing is the solution how to prevent disadvantages of a DL Needle. (2). It is a SL Needle flushed from outside needle, flushing starting 7cm proximal of needle tip. For the first time, it is possible to study in Egg Collection each follicle separately. Schenk et al. (3) All studies in the past, comparing flushing vs. Non-flushing, had ignored the dead space of at least 1300mm (Needle plus tubing). Conclusion: The new Paradigm with definition of success rate in IVF as Cumulative Pregnancy Rate together with an appropriate Egg Collection Technique, that means flushing follicles with the right needle, based on Law of Physics will be the future in ART. Our patients have the right, that we retrieve as much eggs/ follicle as possible and we physicians have to accept the compromise, that duration of OPU procedure will take us a few minutes longer.

Refernces:
(1) Vaughan D, A, Fert. Ster. February 2017Volume 107, Issue 2, Pages 397–404.e3
How many oocytes are optimal to achieve multiple live births with one stimulation cycle? The one-and-done approach

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O62-1082
A RARE LIFE-THREATENING COMPLICATION IN EARLY PREGNANCY

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Problem Statement: Women with pre-existing conditions such as antiphospholipid syndrome (APS) who conceive, exemplify high-risk pregnancies; particularly in the post-natal period. Catastrophic antiphospholipid syndrome (CAPS) is one of the most severe forms of APS, accounting for 1% of cases. Only 50% of women who develop CAPS in pregnancy have a history of APS. However, a high index of suspicion is still needed as up to 41% of patients are categorised as ‘probable’ CAPS. The consequences of an incorrect or delayed diagnosis carries a mortality rate of 33.3 to 53% with CAPS. We present a case where a ‘definite’ diagnosis of CAPS could not be awaited, before initiating lifesaving, prompt and aggressive therapy.
Methods: A 41-year-old woman, Mrs M, presented to our emergency department at 13 weeks’ gestation with a 2-day history of a headache and hypertension. She conceived through IVF-donor egg treatment and had one prior first trimester miscarriage. She had a history of SLE and left carotid endarterectomy and was taking clexane, aspirin and prednisolone daily. In the emergency department, her BP was found to be 190/103 with proteinuria. Her liver function was slightly deranged but other biochemistry was normal. Mrs M was commenced on antihypertensive treatment and discharged. She represented at 24hours and was admitted with epigastric pain and a BP of 188/105 despite treatment. Pelvic ultrasound scan revealed a live intrauterine pregnancy and moderate ascites. She also developed a pyrexia in addition to the persistent hypertensive crisis, therefore a full septic screen was carried out. Chest x-ray showed bilateral pleural effusion/ consolidation and pelvic MRI confirmed moderate ascites and peri-portal oedema. She continued to deteriorate despite antibiotics, antihypertensives and multidisciplinary medical input. Transfer to the Intensive Care Unit (ICU) was decided based on maternal condition and abnormal biochemistry: progressive thrombocytopenia and hyponatraemia, a rising C-reactive protein and white cell count and a markedly elevated ALT (1441 IU/L). A full vasculitic screen was also performed. A CT-head scan revealed posterior reversible encephalopathy syndrome (PRES). A CT-angiogram (pulmonary/renal) revealed moderate ascites and multiple wedge-shaped liver infarcts.
Results: Mrs M’s results and in-patient course were discussed in a dedicated multidisciplinary meeting as she only demonstrated a muted response to intravenous antihypertensives, antibiotics, heparin, immunoglobulin and steroids. It was agreed that an acute vasculitic process, secondary to pregnancy (not infection), was likely. A surgical termination of pregnancy (sTOP) was advised and carried out on day 4 of admission to aid maternal resuscitation against a background of likely poor fetal outcome. A unifying diagnosis of ‘probable’ CAPS was made with input from the Gynaecology, Rheumatology, Hepatology and Haematology teams. She continued her established pre-operative therapy and Rituximab to make an excellent post-operative recovery.
Conclusion: This patient presented with severe neurological, hypertensive and biochemical changes, secondary to ‘probable’ CAPS. She made a dramatic improvement following TOP and intense medical therapy. Although rare, CAPS should be considered in patients presenting with similar symptoms and history, even in early pregnancy. A high index of suspicion, prompt diagnosis and aggressive therapy

are critical for survival.

References:

- Hoayek J. G, Moussa H. N, Rehman, H. A, Hosseini Nasab, S, Blackwell, S. C, Sibai, B. M (2016) Catastrophic antiphospholipid syndrome in pregnancy, a diagnosis that should not be missed. J Maternal-Fetal & Neonatal Med. 29 (24) pp. 3950-3955
- Sciascia S, Lopez-Pedrera C, Roccatello D, Cuadrado M J (2012). Catastrophic Antiphospholipid Syndrome (CAPS). Best Practice & Research Clinical Rheumatology (26) pp.535–541

O63-1099
MICRO VOLUME FREEZING OF HUMAN SPERMATOZOA WITH MINIMAL NON-PERMEABLE CRYOPROTECTANT BY USING CRYOTOP

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Problem statement: Human sperm cryopreservation is commonly used technique in assisted reproduction. However, conventional freezing methods are not appropriate for severely oligozoospermic samples. Recently, Cryotop is considered as the novel container for freezing low concentration of spermatozoa. This study aimed to determine the feasibility of freezing micro volume of human spermatozoa by using Cryotop at different concentration of sucrose. **Methods:** 45 normozoospermic semen samples were processed using a discontinuous density-gradient centrifugation combine with swim-up method. After that, the sperm suspensions were diluted with sperm preparation medium and divided into six aliquots. Five aliquots were cryopreserved by using fast freezing method on Cryotop with sucrose solution at different concentrations (0.05M, 0.10M, 0.15M, 0.20M, and 0.25M). The remaining sample was cryopreserved by using conventional freezing method in cryotube with Sperm Freeze solution as a control group. Post thawing, sperm motility was compared among six groups. **Results:** Before freezing (after sucrose equiliration), the sperm motility was significantly lower in high concentration of sucrose solution (0.20M and 0.25M) in compare with other groups (table 1). However, there was no significant difference in post-thawed among sucrose groups (table 2). Double higher in sperm motility were found when comparing fast freezing protocol (sucrose groups) to conventional freezing protocol (SF group) (68% versus 32%, p0.01).

Table 1: Sperm motility of semen samples, post sperm preparation, adding cryoprotectant agents and post thawing

		N (%) or Mean (SD)			
Container	Cryoprotectant	Initial sample	Post sperm prep	Adding CPA	Post-thawing
Cryotop	Suc 0.05M	47 (8.0)	99 (1.3)	90 (6.3)	67 (14.1)
	Suc 0.10M			94 (5.6)	67 (12.3)
	Suc 0.15M			91 (8.5)	71 (13.2)
	Suc 0.20M			84 (19.1)	70 (12.3)
	Suc 0.25M			77 (18.7)	68 (15.3)
Cryotube	Sperm Freeze			95 (1.8)	32 (18.9)

Conclusion: Rapid freezing of spermatozoa with sucrose is superior for cryopreservation of human spermatozoa in comparison with conventional cryopreservation methods. The new method is quick, easy to perform and cost-effective. It prevents adverse effect of permeable cryoprotectant agents on sperm function and saves more time to find sperm, which may be beneficial to the ICSI outcome. Therefore, it is suitable for patients have very low sperm numbers.

O64-1262
THE ROLE OF RENIN-ANGIOTENSIN GENES POLYMORPHISMS IN THE ETIOLOGY OF EARLY AND LATE PE

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PE is a severe complication developing in 15-17% of pregnant women and is the leading cause of maternal and perinatal morbidity and mortality worldwide. **The aim of the study:** To reveal the frequency of the polymorphism of the ACE I / D angiotensin converting enzyme gene and the type 1 angiotensin II receptor AGTR1 A1166C in women whose pregnancy was complicated by severe preeclampsia with early and late debut. **Materials and methods:** a retrospective case-control study of 41 pregnant women with preeclampsia - the main group - and 25 patients with uncomplicated pregnancy (control group) was conducted. In the main group, we considered two subgroups - early and late preeclampsia. In the first (15 patients), observations were made when, due to the severe condition of the mother and / or fetus, the delivery was performed before 34 weeks of pregnancy. To the group of late preeclampsia (26 patients) - variants of development of this complication after 34 weeks. gestation. **Results:** Polymorphism of the I / D gene of the angiotensin converting enzyme ACE is associated with the risk of developing PE. The presence of the D allele increases the risk of developing severe PE. With the DD genotype, the probability of early PE is 5 times higher than the late PE. The data obtained confirm the involvement of the renin-angiotensin system, as well as the coding genes, in the development of PE. We can say that the polymorphism of the ACE gene is a genetic predictor of the development of early and severe PE. The study of the polymorphic loci of the ACE gene makes it possible to use these gene markers as an assessment of the individual prognosis of development and features of the course of PE. **Conclusion:** Polymorphism of the I / D gene of the angiotensin converting enzyme ACE is associated with the risk of developing PE. The presence of the D allele increases the risk of developing severe PE. With the DD genotype, the probability of early PE is 5 times higher than the late PE.

O65-1431
NEW ADVANCES IN MICROSURGERY OF MALE INFERTILITY TESTIS EXPANDABLE BIOSURGERY AND MICROSURGERY

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In the last COGI Congresses in Paris (Paris, France, November 17-20, 2011, A6), in Hainan (Hainan, China, December 8-11, 2011, A27) and in Singapore (Singapore, July 19-22, 2012), the New Challenges in MARS – Male Reproductive Surgery and MicroSurgery to preserve and/or enhance Male Fertility are strictly dependent on the Innovation Technologies implemented on (TREMS – Technology for REproductive Medicine and Surgery). Expandable Surgery is a New Frontier in Applied (Bio)Technologies for Surgery: it combines Innovation Technologies (Medical Smart Systems) with Advanced BioTechnologies, including Cells Technology, for Regenerative and Reparative Medicine: Expandable BioSurgery is designed to be implemented in real time in the OP as GMP environment. The Needs of a classified BioRepository and/or Clinical BioBank to store and eventually manipulate (activate or expand) the Cell Samples in a GMP environment is mandatory to fit the legal requirements for Cell Therapy in Personalized Medicine and for Cell Therapy and Tissue Engineering in Regenerative Medicine. The new MIMIS (Male Infertility MIcroSurgery) Techniques, developed by our Team, called MIVAS, MIRES, IRMIS, TAS, MIRMAC [MIVAS – Male Infertility Vascular Surgery, MIRES – Male Infertility Reconstructive Surgery, IRMIS – Infra Red Male Infertility Surgery, TAS – Testis Augmentation Surgery, MIRMAC –Microsurgery Reversible Male Contraception based on RISUG Adv.], are designed on this innovative Concept of Expandable BioSurgery to be implemented in Male Infertility and Male Reversible Contraception. TREMS based MIMIS are currently applied through a pilot multi-centric trial with a monitoring period of three years in so-called intermediate and low cost CMM-MIR Hubs in Italy, Hungary, Albania and India, to demonstrate the potential widespread application of MIMIS supported by high technological content - to preserve, restore and enhance Male Fertility Power -. The Testis Insufficiency (Impairment) Syndrome – TIS is a new clinical concept, based on 3T Parameters: Temperature increasing, measured by IR Technology; Testosterone decreasing, measured with salivary test; Testis Function impairing, measured by computer-assisted Dynamic Imaging Technology. In TIS-Testis Insufficiency Syndrome Expandable BioSurgery (TEBS) is combined with expandable MicroSurgery (TEMS) in Real-time in the OP: Three levels of TEBS and TEMS are designed, in relation to the main addressed goals: Sperm Quality Enhancement Morphology – SQEM, Testis Regenerative Matrix – TREM, Testis NanoSomes Release – TENSOR. The New Advanced Expandable MicroSurgery Techniques on the Human Testis (TEMS) pursue three Major Goals for Therapeutics. 1. Enhance the Quality Production of Sperm, modulating the spermatogenetic and spermiogenetic processes through the BioPhysical and Functional Setting of the DNA Biobanking Apparatus of the Human Testis. (BioMicroEngineering Surgery) 2. Enhance or Repair or Regenerate

the Intertubular Matrix of the Human Testis through Autologous Mesenchimal Stem Cells (Cell Therapy) 3. Activate in Situ Metabolic and Cell Processes and Functions through Autologous NanoSomes Activators or Modulators. The Implementation of Innovative Micro and NanoTechnologies at Microsurgery Scale and at Cells Scale in GMP Environment for Male Infertility and in general raises two Major Implications: 1.The Training Process and the Professional Co-Coaching at the Global Knowledge Transfer: The Learning Curve Surgical Training (LEC) for the Microsurgical Operators is mandatory to certify Expertise, Appropriate Technologies and Validated Techniques for Survey as Professional Coaching, 2.The Impact on the Male Factor (IMF) and Cost-Benefit Ratio (C/B) in the Holistic Approach of Infertile Couples through HIA – Health Impact Assessment. Surgical Expertise and Skillfullness, Clinically Evaluable Male Factor Restoration and Improvement and Social Economy Benefits are reported comparing and addressing Human Reproduction and Family Welfare Policies in these Countries.

O66-1297
DOES HPV VACCINATION AFFECT SEXUAL BEHAVIOR IN ADOLESCENT AND YOUNG WOMEN?

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Methods: 300 females 12 to 26 years were asked to fill an anonymous questionnaire of 84 questions regarding demographic characteristics, HPV awareness and sexual behavior. Attitudes and alterations in sexual behavior in relation to HPV vaccination were compared between the vaccinated and the non-vaccinated group. **Results:** Vaccinated cohort was of younger age, started coital sex in younger age (RR =0.75,95% CI 0.58-0.98, p=0.040) and their partners were younger too. Non-vaccinated group was of older age and was more commonly sexual active (RR 0,75, 95% CI 0,58-0,98, p-0,040) with a higher number of sexual partners (RR 0,63, 95% CI 0,42-0,94, p-0,016). No differences were found between the vaccinated and non-vaccinated group on attitude to sex and relationships and the use of condom. More young women on the vaccinated group believed that vaccination should be done early (p=0.001), believed that is a prerequisite for the initiation of coital sex (RR 1.63.95% CI 1.07-1.82, p= 0.001) and that it created an (RR 0,63, 95% CI 0,42-0,94, p-0,016) opportunity to discuss sexual issues with their family (p=0.015). **Conclusion**: Young women that are vaccinated start sex earlier but do so after being vaccinated and show a more responsible attitude towards sex andprevention. The vaccinated group was guided by family, discussed sex withtheir mothers and asked for medical advice on relevant matters.

O67-1092
HIGHER LEVELS OF FOLLICULAR FLUID sRAGE PREDICT A BETTER OVARIAN RESERVE AND BETTER IVF-ET PREGNANCY OUTCOMES

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Problem statement: sRAGE consequently serves as not only a biological marker that reflects pathological changes within the body but also a protective factor that delays the occurrence of diabetes, atherosclerosis, and other diseases. But the role of the soluble receptors for AGE (sRAGE) in ovarian reserve remains unclear. The aim of our study was to investigate whether follicular fluid sRAGE is associated with marker of ovarian reserve and whether follicular sRAGE can predict the pregnancy outcome of in vitro fertilization-embryo transfer (IVF-ET). AMH and INH-B are the most recognized markers of ovarian reserve. **Methods:** The prospective study included a total of 35 IVF-ET patients caused by tubal factors using agonist protocol in our reproductive center. All patients were younger than 35 years of age and had a BMI between 18 and 25. Measurements of sRAGE, AMH and INH-B in leading follicular fluid aspirated without blood at the time of egg collection by ELISA to examine the difference and the correlation. Demograhic clinical data and parameters of IVF-ET results including the number of the oocyte retrieved, pregnancy outcomes are collected. **Results:** We observed an inverse relationship between FF sRAGE protein levels and the total dose of Gn (expressed as international units used per cycle) (r=-0.328, P=0.041); this relationship was independent of age, BMI, or day 3 FSH (beta=-0.319, P=0.010). Correlation analysis showed a correlation between FF sRAGE protein levels and the total number of oocytes retrieved (r=0.488, P=0.005). After the analysis was adjusted for age, BMI, day 3 FSH, and the dose of Gn used, FF sRAGE protein levels could be used to predict the total number of oocytes retrieved (beta=0.005, P=0.008). Women who successfully conceived after IVF transplantation had signifcantly higher sRAGE levels than women who failed to conceive (1906.201±1160.407 vs 1145.147±383.716pg/mL, P=0.048). After the analysis was adjusted for age, BMI, day 3 FSH, and the dose of Gn used, FF sRAGE protein levels could be used to predict the pregnancy outcome (odds ratio=1.014, P=0.039). FF sRAGE positively correlated with AMH and INH-B (r=0.411, P=0.288; r=0.293, p=0.341, respectively). **Conclusion:** These data support a positive relationship between follicular fluid sRAGE and the number of the oocyte retrieved, sRAGE and AMH and INH-B, sRAGE and pregnancy outcome. Higher levels of follicular fluid sRAGE predict a better ovarian reserve and better IVF-ET pregnancy outcomes.

O68-1464
HEALTH BELIEFS OF UNIVERSITY STUDENTS ABOUT HUMAN PAPILLOMA VIRUS INFECTION AND VACCINATION

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Problem statement: Medical personnel's suggestion of the vaccine to patients shall play a significant role in HPV vaccine's acceptance by the society and widespread use thereof.Sufficient knowledge of nursing students on the HPV infection and vaccines is significant in describing this vaccine to and its being accepted by the society as they are medical personnel of the future and included in the risk group in terms of the HPV infection and associated complications.This study has been implemented as a describer in order to identify the medical beliefs of the students of the School of Nursing about the HPV infection and vaccination. **Methods:** This study of descriptive type has been implemented with 496 students attending the 3rd and 4th grades at the School of Nursing of the Ege University.Evaluation of the data obtained from the study has been carried out on computer media, using the Statistical Package for the Social Sciences (SPSS) 20 package programme. Data have been analysed by the use of Kolmograv normal distribution test, number and percentage distribution, ANOVA test and Tukey test. **Findings:** The study has been implemented with 496 (male: 83; female: 413) students with an age average of 22.55±1.06. Once the educational status of the students' mothers has been examined, it is found out that the highest percentage is of the elementary school graduates with 51.2% (n=254) and in terms of the educational status of fathers, the highest percentage is of elementary school graduates with 34.3% (n=170). In terms of the income status of the families, it has been found out that the highest percentage is of medium-level income (96.6%). It has been further found out that 96.6% of the students have heard of the pap smear test and that 58.1% of them have an adequate level of knowledge about the pap smear test. It has been found out that 92.3% of the students have heard of the HPV infection, that 50.8% of them have medium-level knowledge about HPV and that 79.4% of them have learnt such knowledge from the contents of lessons. It has been found out that 78.6% of the students have heard of the HPV vaccine and that 45.8% of those who have heard thereof has medium-level of knowledge. Students have replied the question "Would you be HPV-vaccinated?" "Yes" at 56.3% and "No" at 43.5 percent. 27.8% of those who have replied "Yes" have reported that they would be vaccinated in order to be "protected against HPV". 21.2% of those who have replied "No" have reported that they would not be vaccinated because "they find it not necessary". It has been found out that 79.2% of the students the HPV infection is dangerous for both men and women, that 50.8% of them know the ways of protection and that, of such ways of protection, they know vaccination and monogamy the best. Medical belief model about HPV infection and vaccination scale point average of the students has been found to be 37.67+6.87 and considering that the scale takes a maximum of 56 points, it shows that the students are of medium level. Cronbach-alpha reliability coefficient of the scale has been found to be 0.76. It has been found out that the effective factors concerning the Human Papilloma Virus Infection and Vaccination are hearing about the infection earlier, the resource from which they have heard of it, hearing about the vaccine, their level of knowledge of the vaccine and ways pf protection (p0.05). According to this result, as the university student's state of hearing about and knowing the HPV infection and vaccine increases, their affirmative tendency points about the Human Papilloma Virus Infection and Vaccination also increases. **Conclusion:** Vaccines are the primary strategy in reducing the complications caused by the HPV infection and the costs thereof.Level of knowledge of the medical personnel on the matter shall also affect the efficacy and success of the advice they will provide.The fact that trained medical professionals play an effective role in organising and

holding medical training for the target group will undoubtedly affect the success of vaccination.

O69-1227
THE INVESTIGATION OF NURSES' SELF-EFFICACY PERCEPTIONS WITH PROBLEM-SOLVING ABILITIES

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The study was performed as a descriptive and cross-sectional analysis to investigate nurses' self-efficacy perceptions with problem solving abilities. The aim of the study was composed of the nurses working in a university hospital, while the sampling consisted of those accepting to take part (N=392). The data were collected through the "Nurses' Information Questionnaire", the "Self-Efficacy-Scale (SES)" and the "Problem Solving Inventory (PSI)". The accumulated data were analyzed with appropriate statistical methods using Statistical Package for Social Science for Windows (SPSS) 20.0 package software licenced by Selcuk University. Mean scores of nurses' SES total and four subdimensions (Initiating Behaviors, Maintaining Behaviors, Completing Behaviors and Struggling with Obstacles) were found to be higher as 86,93±12,76, 31,34±5.56, 27,09±4,76, 19,19±4,06 and 9,32±2,48, respectively. Mean scores of nurses' PSI total and three subdimensions (Problem Solving Confidence, Approach-Avoidance and Self Control) were observed to be at medium level as 93,32±22,24, 29,99±9,81, 47,61±10,85 and 15,72±4,66, respectively. Inaddition, while problem solving ability, training after graduation for problem solving and professional title were, in turn, detected to be most influential on self-efficacy perception, the time of professional experience was found to be statistically influentional on problem solving abilities at a higher rate (p≤0,01). A statistically negative powerful and higher significant association was determined to be present between the averages of nurses' SES and PSI scores (p≤0,01). It was also detected that as total and four subdimensions of SES increased, total and three subdimensions of PSI decreased. Based on these findings, we concluded that as nurses' self-efficacy perceptions increase, their problem-solving abilities also increase.

O70-1289
MIDWIFERY STUDENTS' INFORMATION LEVEL AND ATTITUDES TOWARDS LESBIANS AND GAY MALES IN TURKEY

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Problem statement: Various changes have been witnessed in societal attitudes and perception towards homosexuality in Turkey; however, lesbians and gay males are still experiencing serious social problems. Discrimination experienced by homosexual individuals in a society also leads these individuals to experience considerable inequality in access to and use of health care. Midwives actively working in the fields of reproductive, sexual and societal health have important responsibilities and should be aware of mistakes and inequalities in training, national health policies and health care requirements needed by homosexual individuals. For these reasons, it is essential that the awareness of midwives be increased, and midwives be informed and trained about homosexuality and homosexual individuals during undergraduate education. The present study was aimed at investigating the attitudes and information of midwifery student towars lesbians and gay males. **Method:** Four hundred and five participants aged between 18 and 31 years old, all of whom were midwifery students in a university in a Central Anatolian province of Turkey were included into this descriptive study. The demographic information questionnaire (DIQ) designed considering literature by the researchers, the homosexuality attittudes scale (HAS) and the information form for homosexuality (IFH) were used to gather the data. An approval was obtained from both the local ethical board and educational board of the faculty in which the research was conducted. Statistical Package for the Social Sciences for Windows, version 20.0, was used to analyze data. **Results:** While mean age of study participants was 20.60±1.46, mean HAS and IFH scores were 175.44±14.37 and 11.36±2.40, respectively. Participants may be suggested to have negative/homophobic attitudes at middle to higher levels. However, information level of study participants was found at middle level, given that the highest score was 20. While there was a statistically significant association between mean HAS score, and students' grades, location where students lived longest and mothers' educational status (*P* 0.05), no statistically significant association was found between marital status, family type, perceived income level and fathers' educational status (*P* 0.05). Additionally, although a statistically significant association was observed between mean IFH score, and students' family type, perceieved income level and parents' educational status (*P* 0.05), there was no statistically significant association between mean IFS score, and students' marital status, level of grades and location where students lived longest (*P* 0.05). Between mean HAS score and students' age level, a negative significant correlation at middle level was observed (*P*0.05). No statistically significant correlation was found between mean IFH score, and students' mean age level and mean HAS score (P 0.05). **Conclusion:** In our study, it was concluded that midwifery students' attitudes towards lesbians and gay males were negative, and information level was insufficient. As an important part of health care, midwives should be aware of different sexual orientation and personalities to give sufficient and qualified health care to all individuals in the society. We consider that such an awareness can be formed through accurate and sufficient training related to homosexuality during undergraduate education.

O71-1223
SURGICAL MANAGEMENT OF INCOMPETENT CESAREAN SCAR IN PREGNANCY – IT IS A NEW OBSTETRICAL PROBLEM

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The extremely high rate of CS of about 50% in some developed countries has given rise to new life-threatening complications such as placenta previa, pregnancy in the scar and rupture or dehiscent scar in the following pregnancy. A short review (3 case histories) and the author's own case of managing scar rupture during pregnancy are presented. In all patients, the complications set in the second trimester. In each case the ruptured scar was repaired and the pregnancy was conserved. Histological study of the dissected scar tissue indicated inflammatory changes and dysplasia of the connective tissue. All pregnancies terminated in caesarean section and delivery of live babies at different gestational ages. In the discussion section, we point out certain regularities which may be useful for anyone confronting similar cases: perioperative care, surgery of the scar, choice of stitch type, postoperative management and prevention of complications by competent surgery in C-section, and rehabilitation. We believe surgery on a pregnant uterus for incompetent scar (rupture or dehiscence) after a previous cesarean section now poses a new obstetric challenge that requires discussion and elaboration of conservative and surgical approaches to its management. There is no doubt that to prevent the condition in question one should perfect the technique of cesarean section which includes a transverse incision in low segment of the uterus, careful apposition of wound edges and its closure with synthetic absorbable suture, and reliable peritonization. Besides, one should ensure prevention of endometritis and recommend that the patient use birth control rigorously until the next pregnancy is planned. Before planning a pregnancy one needs thorough clinical and ultrasound investigations with contrast hydrosonography and/or magnetic resonance imaging of the uterus.

072-1304
THE EFFECT OF VITAMIN B1 ON THE CHANGE OF APPETITE RELATED TO PREMENSTRUAL SYNDROME IN YOUNG WOMEN

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Introduction: Many women in the premenstrual period may be faced with physical and psychological changes that restricted the acceptance of the responsibility of daily living, jobs and reduced quality of life outdoors. One of these mental disorders is the changes in appetite. Preventing the initiation is the first step in reducing premenstrual syndrome, is very important. Vitamin B1 (Thiamin) may reduce symptoms of PMS through affecting the performance of coenzymes in the metabolism of carbohydrates. **Objectives:** This study was conducted to determine the effect of vitamin B1 on the change of appetite related to PMS. **Methods:** In this double-blind placebo-controlled clinical trial, 100 students with PMS residing at dormitories of Jahrom University were divided randomly into two groups, vitamin B1 and placebo. The severity of mental symptoms specially changes in appetite and desire to eat sweets in two cycles, before and during the intervention, was recorded by the students. The data were analyzed using descriptive and inferential statistics. **Results:** The comparison of vitamin B1 group before and after the intervention showed that vitamin B1 reduced mean mental (35.08%) symptoms significantly (P 0.0001). The reduction of severity was observed in desire to eat sweets was 2.42%. The average of mental symptoms severity of PMS has been

reduced in vitamin B1 group, and the comparison was significantly different. **Conclusions:** Therefore, vitamin B1 is recommended for reduction of symptom severity of PMS include desire to eat sweet. This vitamin can be used to reach a major goal of midwifery, without any side effects.

P01-1473
CORRELATION BETWEEN PROLACTIN, ANTI-MULLER HORMONE, INGIBIN A AND INGIBIN B IN INFERTILE WOMEN

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Background: The objective of our study was to identify the correlations between the anti-Mullerian hormone (AMH), Ingibin A (Ing A) and Ingibin B (Ing B) and prolactin in infertile women. **Materials and Methods:** In this prospective study, 92 infertile (main group) and 8 reproductive healthy (control group) women were assessed. AMH level was lower than 1ng/ml in all women. AMH, Ing A and Ing B and prolactin were determined on days 2-3 of the patients' menstrual cycles. **Results:** The mean levels of Ing A, Ing B and prolactin are showen in table. The levels of prolactin were significantly higher in main group (p0,01). And there was a significantly elevated positive correlation between Ing B and AMH (k=0,310, p0.01) and Ing A (k=0,354 p0.001) in infertile women. We observed a negatively correlation between prolactin and IngA (k=-0,312, p0.05) in infertile women. But, Ing A negatively correlated with Ing B (k=-0,394, p0,01) in reproductive healthy women. **Conclusion:** Although, AMH is low in both group, but correlation between hormones are different. Currently, AMH should not be used alone as the marker of ovarian reserve. Hence, assessment of serum prolactin, Ing A and Ing B levels are mandatory in the work up of all infertile women. **Keywords:** Anti-Mullerian Hormone, Ingibin B Hormone, Ingibin A hormone, prolactin

P02-1284
SEROPREVALENCE AND CLINICAL CORRELATES OF HUMAN IMMUNE DEFICIENCY VIRUS INFECTION AMONG CLIENTS WITH INFERTILITY IN NORTHWEST NIGERIA

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Problem statement: In Africa infertility prevalence is high and it is associated with major psychosocial burden. HIV infection rate is also high in Africa and studies have shown that fertility may be reduced in infected women. **General Objective**: The study determined the prevalence and clinical correlates of HIV infection among clients with infertility. **Methodology:** A cross-sectional study conducted in women attending the infertility clinic at Ahmadu Bello University Teaching Hospital, Zaria. **Results:** Twenty one of the 250 clients tested positive for HIV giving a prevalence of 8.4%, 33.3% were newly diagnosed while 66.7% were known cases on antiretroviral therapy. Secondary infertility accounted for 81%. Serodiscordance was seen in 42.9% of HIV positive women and 52.4% had stage II disease. Tubo-peritoneal infertility was diagnosed in 71.4% of cases which is statistically significant (p value 0.048), while 9.5% had multifactorial causes of infertility. **Conclusion:** Compared to HIV rate in the general population, this study recorded a higher rate. There is need to screen all clients with infertility and their partners for HIV infection.

P03-1567
TRANSIENT ERECTILE AND EJACULATORY DIFFICULTIES IN PARTNERS OF INFERTILE WOMEN - A MANIFESTATION DURING INFERTILITY MANAGEMENT

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Problem statement: Semen collection for analysis, processing for intrauterine insemination (IUI) and timed intercourse as a form of assisted conception treatment are important procedures in the management of infertility. **Objective:** To determine the reasons associated with procedure- related difficulties in erection and or ejaculation in men with no previous experience/ history of such. **Methods:** A cross-sectional study of male partners of women attending infertility clinic at a tertiary teaching hospital and a private infertility clinic in Northwest Nigeria. **Results:** Of the 66 clients, coital difficulty occurred during timed intercourse in 35(53%) clients, collection of semen for analysis in 24(36.3%) clients and during collection of semen for processing and IUI in 7(10.6%)clients. In 48 (72.2%)clients they experienced absence of erection while 18(27.3%) experienced erection but no ejaculation. Reasons found were mainly issues with masturbation (95.8%) as a preferred method for semen collection in the analysis group, anxiety (94.3%) in the timed intercourse group and combination of anxiety, issues with masturbation and unfamiliar setting for semen collection (100%) in the IUI group. **Conclusion:** Individualized counselling and psychotherapy where applicable should be routinely offered. Use of appropriate type of condom for semen collection could be made more accessible in instances where its use need be.

P04-1344
ANTIOXIDANT EFFECT OF ALLIUM CEPA (ONINION) AFTER EXPOSURE TO ESCHERICHIA COLI ON BIOCHEMICAL FACTORS, THE BLOOD ANTIOXIDANTS, AND TESTIS TISSUE IN RATS

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Problem statement: Infectious infertility is considered by the World Health Organization (WHO) as a main problem in sexual life and public health. The aim of the present study was to investigate the antioxidant properties and the effect of Allium cepa (onion) juice on the tissue of testis and seminiferous tubules affected by Escherichia coli. **Methods:** Thirty-Two adult Wistar male rats aging 2.5 to 3 months divided to four groups of 8 rats. Enterotoxigenic E. coli (serotype 0114) used to infect the rats. Onions prepared from the district Ilkhichi, Iran which were used for two groups. Following the infection, pathologic samples were prepared from the tissue of the sperms which were investigated through hematoxylin & eosin (H & E) staining. In addition, the motility, vitality, the number of sperms, total antioxidant capacity (TAC), luteinizing hormone (LH), and testosterone were evaluated as well. **Results:** Results indicated that in the control group all the seminiferous tubules are sticking together and all the lines of sexual germ cells observed; while, in E. coli group were disunited and the line of sexual cells were destroyed. In the groups infected by E. coli and treated by A. cepa juice, the effects of bacteria reduced considerably. The number of sperms, sperms vitality and motility decreased significantly in E. coli infected group, while in the A. cepa juice + E. coli the effects of infectious was reduced. **Conclusion:** A. cepa juice significantly increases TAC and testosterone. The results indicated A. cepa juice has protective effects against E. coli bacteria and fertility, testis tissue and antioxidants improvement and the effects of the bacteria decreased significantly.

P05-1265
THE EFFECT OF THE CHEMOTHERAPY PERIOD ON THE FATIGUE SYMPTOM IN GYNECOLOGICAL CANCER PATIENTS

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Problem Statement: Gynecological cancer is in the first place in the cancers in women in Turkey and in the world, the number of cases increases every year. In gynecological cancers, chemotherapy is the most frequently used treatment option after surgery despite its side effects. In gynecological cancer patients, the most common side effect of chemotherapy is the fatigue symptom which affects the patients' quality of life. **Method:** This review was written by evaluating the findings of 17 articles on cancer and fatigue which were published between 2000 and 2012. The articles were searched in online data bases between 01.07.2017 and 20.08.2017. The aim of this study is to discuss the effect of the chemotherapy period on the fatigue symptom in gynecological cancer patients. **Results:** In the period of cancer treatment, anemia, cachexia, fever, infections, metabolic diseases, sedative medications, obesity, low activity level, alcohol use, environmental toxins, previously received cancer treatments are among the most important causes of fatigue. It is also known that women are more likely to experience the fatigue symptom in cancer treatment than men. Most of the patients (80-99%) experience fatigue symptoms during chemotherapy. Fatigue symptoms may continue in 15-40% of the patients even after years of treatment. In addition, there are studies showed that fatigue is permanent in 17-26% of the cases. The insomnia due to menopausal symptoms in the women who underwent oophorectomy also leads to fatigue. The side effects regarding the gastrointestinal system which are developed during chemotherapy and especially fatigue resulting

from anemia due to bone marrow depression may negatively affect womens` quality of life. **Conclusion:** Fatigue is the most common symptom in gynecological cancer patients during chemotherapy and it negatively affects the patients' quality of life. Healthcare professionals should determine the cause of fatigue at first and develop strategies for coping with the fatigue symptom that develop in the patients using pharmacological or non-pharmacological methods. If the patients have anemia, fever, infection, dehydration, electrolyte imbalances, cachexia, depression, anxiety, pain, sleep problems and hypothyroidism, appropriate treatment and care should be applied. The training should be given to protect and increase the energy of the patients.

P06-1208
FUNCTIONAL STATE OF ENDOMETRIUM DURING THE «WINDOW OF IMPLANTATION» CAN BE ASSESSED WITH MRNA EXPRESSION LEVEL OF PAEP, DPP4, MSX1 AND HLA-DOB GENES

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Human implantation is a complex and multifactorial process. The success of implantation depends on the quality of the embryos and the readiness of the endometrium for embryo nidation. We carried out multivariate analysis of expression data of endometrial tissue at different stages of menstrual cycle to identify a complex of potentially informative genes. Further we tested the markers for determining the receptive status of the endometrium using the real-time quantitative polymerase chain reaction (qRT-PCR). **Aim of the study:** To determine the most informative markers for assessing the functional state of endometrium during the "window of implantation" and creating a model for assessment of the readiness of endometrium for embryo implantation. **Material and methods:** 47 women with tubal infertility and a successful IVF pregnancy participated in the study. Pipelle endometrial sample was performed during the supposed «window of implantation» in natural cycle with subsequent histological study, and transcriptional profile of genes GPX3, PAEP, DPP4, TAGLN, HABP2, IMPA2, AQP3, HLA-DOB, MSX1, POSTN determined by reverse transcription and real-time quantitative polymerase chain reaction (qRT-PCR). Bioinformatical analysis of open access data of normal endometrium expression performed to search for key genes and their expression changes in the processes of endometrial regeneration. The first stage of bioinformatic analysis is the search for data suitable for studying the selected object. In this case, it was interesting for us to study the expression of genes in the normal endometrium in different phases of the menstrual cycle. For this purpose, a search was made in the database of expressions ArrayExpress [https://www.ebi.ac.uk/arrayexpress/]. For the first stage of further work, a data set was selected E-GEOD-6364 (http://www.ebi.ac.uk/arrayexpress/experiments/E-GEOD-6364/). In this data set, samples of normal endometrium are available for analysis in three stages: proliferative (n=5), early secretory (n=3), and medium secretory (n=8). First, we loaded the data to R [https://cran.r-project.org/], the data were normalized using the method of quantile normalization implemented in the limma package, then samples of normal endometrium were selected, and analyzed using principal component analysis. **Results:** Differences in the level of mRNA expression of all the studied genes in the receptive endometrium were found in comparison to the prereceptive one, which allowed us to classify two functional states of the endometrium. The results of histological examination responded to the stage of maturation of the endometrium in 78.7% of cases. Receptive endometrial status can be determined based on the integral evaluation of mRNA expression level of PAEP, DPP4, MSX1 and HLA-DOB genes. **Conclusion:** The model for determining a personalized "window implantation" is offered for practical application in ART. **Key words:** IVF and PE, personalized "window of implantation", transcriptional profile, real time RT-PCR.

P07-1054
A SET OF NOVEL DECISION-MAKING INDICES TO FREEZE ALL EMBRYOS OR TO CONTINUE FRESH EMBRYO TRANSFERS UPON EACH CONDITION IN THE INDIVIDUALIZED CONTROLLED OVARIAN STIMULATION CYCLES

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Problem statement: Freeze-all policy is a novel approach to improve assisted reproductive technology (ART) outcome based on that controlled ovarian stimulation may have a negative effect on the receptivity of the endometrium for embryo implantation. However, overall benefits and limitations of the new strategy have not been elucidated. We have created a set of novel formulae to consider the policy upon each condition at every ART facility. **Methods:** We have set up two indices: the freeze-all suggestion (FAS) and the freeze-all consideration (FAC). Each index is calculated by the formula as shown in Figure 1. We applied the indices in our own practice after the data of conventional freeze-all cycles, such as those for avoiding ovarian hyperstimulation syndrome (OHSS) or those due to the thin endometrium, had been eliminated. **Results:** Overall FAS and FAC index calculated from our most recent 896 cycles was 18.6 and 59.7, respectively. FAS and FAC index in women 35 years old and over (481 cycles) was 17.2 and 63.8, respectively. FAS and FAC index in women younger than 35 (415 cycles) was 20.2 and 54.9, respectively. FAS and FAC index in women with peak estradiol (E2) concentration 3,500 pg/ml or more (162 cycles), where we currently freeze all embryos if E2 is increased above 5,000 pg/ml, was 27.7 and 71.6, respectively. FAS and FAC index in women undergoing GnRH agonist/antagonist (509/287 cycles) was 22.8/13.2 and 61.5/60.3, respectively. **Conclusion:** The new indices helped to compare the merit of freeze-all application upon each condition. In our protocol, the benefit of freeze-all policy may exist under the condition of lower peak E2 than that for avoiding OHSS. GnRH antagonist cycles did not show any advantage of the freeze-all policy in our practice.

FAS index = ② ÷(①+②+③)×100%

FAC index = (②+③)÷(①+②+③)×100%

	ET	Following TET(s)
①	Yes	—
②	No	Yes
③	No	No

Figure 1. A set of novel indices and formulae to apply in each condition. FAS: freeze-all suggestion. FAS: freeze-all consideration. ①②③: fresh cycle number. FET: fresh embryo transfer. TET: frozen-thawed embryo transfer. Yes/No: clinical pregnancy without ectopic pregnancy.

P08-1390
AN ALTERNATIVE TO HORMONE THERAPY OF ADENOMYOSIS

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Adenomyosis is a common gynecological disease noted in more than half of all reproductive age women. The high rate of this condition, low effectiveness of hormone therapy and undesirable effects, as well as a low quality of patients' life, call for a search for more effective medicamentous and non-medicamentous therapies. Treatment of adenomyosis requires pathogenetically effective drugs able to act on all components of pathogenesis. Such target drugs are indole-3-carbinol (Indinol ®) and epigallocatechine-3 gallate (Epigallate®). Indole-3-carbinol decreases estrogen dependent cell proliferation, stimulates apoptosis of cells with enhanced proliferative activity in endometrial and myometrial tissue. Epigallocatechine-3 gallate suppresses neoangiogenesis and produces an antioxidant effect improving homeostasis in the tissues of target organs.
Objective: assessing the effectiveness of therapy with indole-3-carbinol and epigallocatechine-3 gallate for adenomyosis in women

of reproductive age. **Materials and methods**: 7 patients with adenomyosis were examined. The mean age of patients was 34.5±0.7. The examined group included women with confirmed diagnosis of adenomyosis, no indications for surgery, without severe extragenital disease or suspicion of any type of malignancy at the time of treatment; these patients had previously rejected hormone therapy. The patients received a complex examination per the adenomyosis protocol: investigations and lab tests, instrumental examinations (ultrasound and color Doppler of pelvic organs), hysteroscopy with myometrial biopsy and histological study of the material, if indications are present. The extent of pain syndrome was assessed using VAS. All patients received Indinol and Epigallate, 2 capsules of each twice a day for 6 months. **Results and discussion**: Most of the examined women had other obstetric and\or gynecologic disease: diseases of the cervix (40.05%), complicated delivery and abortion (25.9%), inflammatory conditions of the uterus and appendages (21.4%). Prior to receiving the target therapy with medications in question, 93.3% of patients showed various menstrual disorders with dysmenorrhea (80%) and frequent heavy flow (57.3%) predominating. Dyspareunia was noted in44% of cases. The severity of pain prior to the onset of therapy was 6.94±0.24 points. Ultrasound and color Doppler of pelvic organs was done on day 5 of the woman's period. Per ultrasound findings, uterine walls too thick for the day of period were seen in 64% of patients, increased volume of uterus is if at 5 weeks' gestation – in 78.7%. The mean size of posterior uterine wall on ultrasound was 7.43±0.2 mm, the mean volume of uterus was 5.04±0.1 weeks of gestation. 6 months after the onset of non-hormonal treatment, 55% of women had a normal period without abnormalities. The rate of dysmenorrhea decreased to 20% (p0.01), the rate of dyspareunia – to 5.3% (p0.01). The severity of pain was 2.15±0.21 points (p0.01). Ultrasound findings indicated that enlarged uterus with thickened posterior wall persisted in 14.7 and 21.3% of patients, correspondingly (p0.01). Ultrasound and color Doppler showed that the mean size of posterior wall did not exceed 5.12±0.18 mm, its mean volume – 4.94±0.12 weeks. In 75% of cases a regression of endometrioid heterotopy was seen. All patients receiving Indinol and Epigallate noted an improved quality of life and absence of any undesirable effects. **Conclusions**. Findings obtained through this study indicate clinical effectiveness of target therapy, good tolerance of Indinol and Epigallate, absence of side effects. The medications in question show a powerful antiproliferative effect, which underlies the suppression of endometrioid heterotopy growth and development. Administration of these medications is an effective alternative to hormone treatment.

P09-1395
DIFFERENTIAL DIAGNOSIS AND TREATMENT OF UTERINE MYOMA ASSOCIATED WITH ADENOMYOSIS

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The last decade has been characterized by a steady increase in the frequency of uterine fibroids and a combination of fibroids with adenomyosis in women of 35-40 years, accounting for 80% of planned operations. The volume of surgery depends on the woman`s age, reproductive plans, and the size of the node and the combination with other benign hyperplastic processes of the uterus. The aim of the study was to diagnose the uterine myoma and its combined forms for choosing the tactics of differentiated organ-preserving treatment. We examined 93 patients of reproductive age with uterine myoma, which were divided into 2 groups: 1st - 45 patients with submucous myoma in combination with adenomyosis, 2 group - 48 women with simple myomatous nodes. The age was ranged from 30 to 45 years, and averaged was 38.4±0.49. Ultrasonography was performed in II phase of the menstrual cycle, and immediately after menses, to differentiate fibroids and adenomyosis foci. During ultrasound, the myomatous nodes were visualized as a hypo- or hyperechoic formation with distinct contours. Adenomatous foci were visualized as anechogenic formations with fuzzy contours and finely divided contents (blood). Dopplerometric study of blood flow around the node with the determination of the resistance index (RI) revealed that in patients of the 1-group, the RI ranged from 0.42 to 0.54 and averaging 0.47±0.01, which indicates the good blood supply to the site. The blood flow inside the node was determined mainly at a node size of more than 15 mm, while the RI was on the average 0.57±0.01. In patients of the 2-group study of blood flow around the node revealed an increased RI from 0.55 to 0.70, averaging 0.66±0.02. In this case, the blood flow inside the node was determined only in medium and large nodes, amounting to 0.68±0.03, the differences between the mean values were significant (p0.001). At the same time, adenomatous foci were characterized by single color signals along the periphery and lack of blood flow inside. For treatment of patients in both groups assigned selective modulator of the progesterone receptor (SMPR) - ulipristal acetate (UPA). Dynamic ultrasound showed that the use of UPA in the 1-group in women with myoma and adenomyosis, resulted in a decrease in myoma nodes by 15-20% in the volume, the RI increased to 0.60 ± 0.63, while the adenomatous foci did not change. In group 2, the myomatous nodes decreased by 35-50% from the initial, the RI in this case was 0.70-0.76, and after 3 months it increased to 0.8. The value of determining the quality of blood flow during treatment is that to increase the RI, one can judge the deterioration of the blood supply to the node, its transition to the avascular form, which clinically coincided with a decrease in the size of the nodes. Some of the nodes became avascular, which indicates a good effectiveness of treatment. At small nodes with a diameter of up to 2 cm, blood flow was not detected, and the nodes were disappeared and resolved. Some of the nodes became avascular, which indicates a good effectiveness of treatment. Thus, a dynamic study of the quality of blood flow around and inside the node by Dopplerometry helps determine the effectiveness of conservative treatment. The efficacy of UPA in the treatment of myomas in combination with adenomyosis requires further study.

P10-1590
FEATURES OF THE COURSE OF PREGNANCY AND THEIR OUTCOMES IN WOMEN WITH CARDIAC PATHOLOGY

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Diseases of the cardiovascular system in pregnant women can complicate the course of pregnancy, lead to premature birth and perinatal pathology. Of particular interest is the development of cardiac pathology in pregnant women who did not have a history of this pathology, as well as the detection of the first-time cardiac pathology in re-pregnant women. The purpose of this study was to determine the features of the course of pregnancy and childbirth in patients with cardiac pathology in the history and in pregnant women with a newly diagnosed pathology. A total of 48 pregnant women were examined, which are divided into 2 groups: 1 group of 22 women with a history of heart disease, and 2 women with 26 women who had heart disease for the first time during this pregnancy. The mean age of the examinees was 25 ± 4.6 years. The study of parity of pregnancy showed that in the 1-group the first-pregnant women made up the majority (77.3%), the rest were re-pregnant. In the second group, the first-pregnancy groups accounted for about one-third (34.6%), while the rest were re-pregnant. Observation and treatment of all pregnant women was carried out under the supervision of a cardiologist. The gestation period for admission to the hospital ranged from 22 to 32 weeks. In the 1 group of pregnant women, 63.6% had congenital heart defects, the rest - acquired pathology (postmiocardial cardiosclerosis, mitral valve prolapses - 36.4%). In group 1, pregnant women were admitted to inpatient care in the department of pregnancy pathology for preventive treatment in the II and III trimesters. However, despite the treatment, more than half (59.1%) of them had complaints at the end of the II-trimester for weakness, dyspnea. In the 2-group, all pregnant women went for examination and treatment in connection with complaints about shortness of breath, tachycardia, pain in the heart for the first time during this pregnancy. All patients underwent a clinical examination by electrocardiography, echocardiography. The results of the research showed that in the 2-group in 4 (15.4%) women the congenital heart defects (defect of the interventricular or interatrial septum) were first revealed, which had no clinical manifestations before. The most frequent (14 women - 53.8%) was diagnosed with postmiocardial cardiosclerosis. In 2 (7.7%) patients, dilated cardiomyopathy was detected. In 6 (23.1%) patients with echocardiography, the prolapse of mitral valve flaps with regurgitation of I or II degree was revealed. All pregnant women underwent cardiotonic therapy. The increase in the cardiovascular insufficiency clinic was an indication for preterm delivery by cesarean section more often in 81.8% of the pregnant 1 group compared with the pregnant women in the 2nd group (61.5%) mainly in pregnant women with heart defects and in patients with dilated cardiomyopathy. Carrying out the prevention of fetal distress with corticosteroids contributed to a decrease in perinatal losses, especially in pregnant 1-group, who received preventive treatment during pregnancy. Conclusions. The pathology of the heart in pregnant women can have a latent course and manifest itself at the end of II or III-trimester. Congenital heart defects are

more often an indication for operative delivery. The emergence of cardiac pathology for the first time after the second-third birth requires further study of risk factors, especially the course of the postpartum period.

P11-1345
PRETERM BIRTH: CAESAREAN SECTION VERSUS VAGINAL DELIVERY

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Problem statement: To find the optimal mode of delivery of preterm babies we compared perinatal outcomes of preterm birth by vaginal and caesarean delivery. **Methods:** we included 157 premature babies after vaginal and 124 premature infants after caesarean delivery. We excluded all pregnancy with complications. And because of this we couldn't compare perinatal outcome before 28 weeks, because all caesarean section 28 weeks were made because of severe complications of pregnancy. **Results:** there was no significant difference between the vaginal and caesarean delivery in birth asphyxia (Apgar score less than 7 at five minutes) (2,54% and 0,9%; RR 3,15, 95% CI 0,358-27,91) and respiratory distress (22,3% and 29.0%; RR 0,768, 95% CI 0.514-1,15). Also, no difference in hypoxic ischaemic encephalopathy (65.6% and 72.6%, RR 0.904, 95% CI 0,773-1.057) and intraventricular haemorrhage (IVH) (3,18% and 1,61%; RR 1.975, 95% CI 0.39-10.0). The biggest interest was the neonates 28-32 weeks. We also didn't find difference between vaginal and caesarean delivery in birth asphyxia (8.33% and 7.14%, RR 1.167, 95%CI 0.132-10.294) and hypoxic ischaemic encephalopathy (83.3% and 85,71%, RR 0.972, 95%CI 0.75-1.26). But only newborns after vaginal delivery had IVH at 28-32 weeks. Conclusions: we did not find sufficient evidence that cesarean section in preterm birth improves perinatal outcomes.

P12-1150
POLYHYDRAMNIOS AND CLUB FOOT ASSOCIATION AS PRE-NATAL FIRST SIGN OF A NEMALINE MYOPATHY

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Problem statement: Nemaline myopathy is characterized by nonprogressive muscular weakness most prominent at proximal muscle groups[1]. Congenital disease is present in 82% of cases[2]. Inheritance can be sporadic, autosomal dominant or recessive [3]. Most cases present no antenatal signs of distress. Fetal-onset phenotypes are recognized, however sonographic features are non-specific, making prenatal diagnosis rare: polyhydramnios, reduced fetal movements, talipes or positional limb abnormalities, inability to visualize the stomach and borderline ventriculomegaly.[4] Sonographic abnormalities frequently develop in third trimester of pregnancy. [4] Majority of cases present in early ages with severe hypotonia and muscle weakness.[1] The aim of this work is to make obstetricians aware of the relevance of nonspecific sonographic signs that, although rare, can reveal a disease with severe burden. **Methods:** Single case retrospective study. **Results:** A 25-year-old woman, in her first pregnancy was referred to our hospital after a bilateral club foot was diagnosed in second trimester routine ultrasound (image 1). Until then, pregnancy was uneventful. Nuchal translucency and aneuploidy screening were both low risk. Consanguinity and congenital diseases were unknown. Fetal movements were perceived as normal. Polyhydramnios was diagnosed in third trimester ultrasound. Parents refused diagnostic amniocentesis. Labor occurred at 40 weeks without any sign of non-reassuring fetal heart rate pattern. A male newborn with 2960 gr was delivered. Apgar score at first minute was 3 with requirement of resuscitation and ventilation maneuvers. Muscular weakness was observed from birth with severe hypotonia which motivated the admission to neonatal intensive care unit. Club feet was confirmed. Persistent need for enteral feeding and ventilation motivated further studies. Karyotype was normal. Muscular biopsy suggested Nemaline Myopathy. **Conclusion:** Nowadays pre-natal diagnosis shows exponential growth. Non-specific forms of presentation of severe diseases must never be forgotten. In this clinical setting, we reinforce the previous statement showing club foot and polyhydramnios as signs of a severe and rare myopathy. When such signs exist, although prognosis is good in most cases, pre-natal counselling must be cautious. Sharing information with neonatologist is significant because can improve initial care to new born. In this case, we also emphasize the value of prenatal counselling in a future pregnancy, given the genetic transmission of disease.

Image 1– Sonographic findings

Bibliography:

Wallgren-Pettersson C, Sewry CA, Nowak KJ, Laing NG. Nemaline Myopathies. *Semin Pediatr Neurol*. 2011;18(4):230-238.

Ryan MM, Schnell C, Strickland CD, et al. Nemaline myopathy: a clinical study of 143 cases. *Ann Neurol*. 2001;50(3):312-320. http://www.ncbi.nlm.nih.gov/pubmed/11558787. Accessed July 5, 2017.

Laing NG, Nowak KJ, Wattanasirichaigoon D, et al. Mutations in the skeletal muscle alpha-actin gene in patients with actin myopathy and nemaline myopathy. *Nat Genet*. 1999;23(2):208-212.

Massalska D, Zimowski JG, Bijok J, et al. Prenatal diagnosis of congenital myopathies and muscular dystrophies. *Clin Genet*. 2016;90(3):199-210.

P13-1399
THE CHORION TYPE EFFECTS ON THE COURSE OF TWIN PREGNANCIES

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Perinatal care and delivery of multiple pregnancies are topical problems in modern obstetrics. The reason for it is high level of complications for women and fetuses during gestation, delivery and post-natal periods. In pregnancy with twins' perinatal morbidity and mortality up to 6 times higher than in singleton pregnancies, and in monochorionic these rates are 3-4 times higher than the dichorionic. In connection with these multiple pregnancies require a differentiated approach to them, depending on the history of the occurrence and the type of placentation. Since it is the choriality in pregnancy of twins that has a significant effect on the incidence of complications, the tactics of managing pregnancy and labor, determines the prognosis of perinatal outcomes. **Materials and Methods**: We conducted retrospective analysis of the pregnancy duration and labors in 765 cases of twins' births between 2007 to 2017. **Results:** The percentage of twins that were delivered was 2.2%. The ratio of monochorionic and dichorionic types was 1:10. In this case, this ratio of spontaneous twins was - 1: 8, and 1:12 for the induced ones. The duration of monochorionic twin's pregnancies, regardless of occurrence and type, was accompanied by complications at different periods of gestation in 100% cases: premature delivery was diagnosed in 74% of cases, preeclampsia of various severity in 71%, anemia in 70%, gestational diabetes mellitus in 62%, premature rupture of membrane in 41%, chronic placental insufficiency in 77% of cases, and feto-fetal syndrome in 18%. During the gestation of dichorionic twins' complications were diagnosed not so often and reached 60%: premature birth in 58.7%, premature rupture of membrane in 30%, placental insufficiency in 47.4%, preeclampsia of various severity in 45%, anemia in 44, 8%, cervical incompetence in 24%, hydramnion in 17.5%. In the case of induced twins, complications were observed seven times more often. Vaginal delivery occurred in 189 (25%) pregnant with twins. A total number of 576 (75%) pregnancies with twins were completed by a cesarean section. 72% of pregnant women with monochorionic twins were delivered operatively. The main indications for cesarean section were: increase in the severity of placental insufficiency - 42%, acute hypoxia of one of the fetus - 27%, and an increase in severity of

preeclampsia-15%. Meanwhile, 70% of cases were premature deliveries. In case of dichorics, the indications were following: improper position of fetus in 20%, severity of placental insufficiency in 18%, acute hypoxia of one of the fetus in 15%, increase in severity of preeclampsia in 12%, anomaly of labor activity in 6% and bleeding in 2,5%. **Conclusion:** Differentiated approach, depending on the type of placentation, timely correction of specific complications of multiple pregnancy contributes to the improvement of perinatal outcomes in this group of pregnant women of high risk.

P14-1137
EFFECT OF INTRAVENOUS KETOROLAC ON POSTOPERATIVE PAIN AFTER CESAREAN SECTION: A RANDOMIZED DOUBLE-BLINDED CONTROLLED TRIAL

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Introduction: Ketorolac is occasionally administrated for post cesarean delivery analgesia. The clinical efficacy of ketorolac for post cesarean analgesia had never been directly compared to meperidine. The purpose of this study was to determine the efficacy of ketorolac for pain control in post cesarean delivery compare to meperidine. **Methods:** This was a randomized double-blind controlled trial comparing the effectiveness of intravenous ketorolac compared to meperidine. The inclusion criteria were term pregnant women who were 18-40-year-old and underwent cesarean delivery. The subjects were randomly divided into study and control groups. The study and control group received 30 mg of ketorolac and 50 mg of meperidine intravenously after surgery, respectively. Visual analog score (VAS) was used to assess the post operative pain ranged from 0-10. VAS was recorded at 3,6,12 and 24 hours postoperatively. Demographic data of parturient, newborn and side effects were also recorded. **Results:** A total of 580 cases were recruited. There were 297 and 283 cases in study and control group. Both groups showed no statistical difference in mean age, gestational age, fetal weight, parity and blood loss. Either ketorolac or meperidine group showed no significant post operative pain relief at 3, 6, 12 and 24 hours. After first initial post-operative pain assessment, 8% (24/297) and 7.4% (24/283) of participants needed and received rescue analgesia. Subjects in both groups who had VAS equal or more than six had equally post operative pain relief either by ketorolac or meperidine. There was no maternal, fetal complications and serious side effect in this study. **Conclusion:** Ketorolac had equal efficacy to meperidine. It could be an alternative medication for pain control in post cesarean delivery.

P15-1180
COMPARATIVE CLINIC OUTCOMES ACCORDING TO THE TYPE OF rFSH USED IN CONTROLLED OVARIAN STIMULATION PROTOCOLS

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Problem statement: Patients undergoing assisted reproduction treatments have been stimulated with different types of gonadotropins hormones being the recombinant human FSH (rFSH) the most used in controlled ovarian stimulation protocols. Recently new versions of rFSH have emerged on the market to be comparable to the original products in efficacy and safety. The objective is to compare clinical results in fresh oocytes cycles with respect to three ovarian stimulation protocols using the same rFSH molecule belonging to three brands: Puregon®, Gonal-f® and its biosimilar Bemfola®. **Methods**: Retrospective observational study that include 1050 patients that were divided into three groups per the type of rFSH used for ovarian stimulation: 16% were stimulated with Bemfola (n=171), 49% with Gonal (n=513) and 35% with Puregon (n=366). The embryos were cultured in incubators with low oxygen tension. The technique of fertilization was ICSI or IVF per the center's standard procedures, and a maximum of two embryos or blastocysts were transferred if the transfer was performed on day 3 or 5 after oocyte retrieval. One-way analysis of variance for continuous variables and the chi-squared test for categorical data were used for data analysis. Statistical analysis was performed with the Statistical Package for Social Sciences, version 20.0 (SPSS, IBM Corporation, NY, USA), and differences were significant if the probability of their occurrence by chance was 0.05. **Results:**

The results are shown in the table -

	BEMFOLA (n=171)	GONAL (n=513)	PUREGON (n=366)	p
Age (years)	36.0 ± 0.5	36.3 ± 0.2	36.0 ± 0.3	0.163
Oestradiol hCG (pg/ml)	1650 ± 148	1598 ± 85	1830 ± 124	0.005
Progesterone hCG (ng/ml)	0.7 ± 0.2	0.6 ± 0.1	0.7 ± 0.1	0.043
Stimulation days	10.8 ± 0.3	10.7 ± 0.2	10.6 ± 0.3	0.847
Average Oocytes retrieved	8.8 ± 0.9	9.4 ± 1.0	12.0 ± 0.6	<0.001
Total rFSH dose	2011 ± 99	1783 ± 47	1585 ± 48	<0.001
Implantation rate (%)	34.8	37.0	40.8	0.396
Clinic Pregnancy rate (%)	45.7	47.4	51.4	0.462
Miscarriage rate(%)	12.4	17.2	13.8	0.291

Conclusion: This retrospective study shows similar clinical outcomes achieved regardless the type of rFSH used in ovarian stimulation, and new recombinant human FSH-biosimilar have been developed to provide a viable alternative for patients with the same efficacy and safety as FSH products used in IVF treatments.

P16 - 1555
OVARIAN GRANULOSA CELL TUMOR: A CASE REPORT

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Problem Statement: Granulosa cell tumors (GCT) are rare neoplasms with indolent behavior. They are characterized by long natural history and their tendency to recur years after the initial diagnosis. Clinical Case: We describe a case of a woman, 36 years old, gesta 2 para 2, that was referred to our hospital because she desired a sterilization. The patient had a history of stroke 3 years before and of a polipectomy the year before. She wasn´t undergoing any therapeutic. While doing the pre-operative workup for sterilization, was diagnosed a left adnexal cystic mass with 22x 40 mm with abnormal Doppler flow. The patient was asymptomatic, with no signs of virilisation, except presenting amenorrhea with 1 year of evolution. Serum FSH, estradiol and testosterone levels were in the normal range. Our group proposed a laparoscopic left adnexectomy and right salpingectomy. The histology revealed a solid tumor, suggesting an ovarian granulosa cell tumor adult type, with capsule invasion. To stage the disease, she had been offered a thoraco-abdomino pelvic computerized tomography, which didn't reveal alterations. New estradiol levels were performed, with elevation (201, 8 ng/mL) comparing to the previous ones. Anti-mullerian hormone levels were normal. As the patient didn't intent to preserve her fertility, she was advised to complete the staging surgery, including, total hysterectomy with right adnexectomy, peritoneal lavage and peritoneal biopsies. No intra- or post-operative complications occurred. The final histology didn't show any sign of malignancy. Our oncology group proposed a bleomycin, etoposide and cisplatin chemotherapy scheme and scheduled a trimestral pattern of follow-up. **Conclusion**: Surgery is the primary treatment modality for granulosa cell tumors, although the optimal management and follow up of these tumors are controversial.

P17-1454
AN EVALUATION OF THE USE OF G-CSF AS AN ADJUNCT TO IVF IN WOMEN WHO HAVE PREVIOUSLY FAILED ATTEMPTS AT PREGNANCY WITH IVF

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Problem statement: For some, pregnancy by standard In Vitro Fertilisation (**IVF**) is not achieved, even if ovulation induction and embryo development is successful. This may be due to defective implantation. A thin endometrium is associated with implantation failure. Studies show that improved endometrial thickness increases the probability of successful IVF. **Objectives:** To evaluate the effects of Granulocyte Colony Stimulating Factor (**G-CSF**) as an adjunct to standard IVF. The study looked at the influence of G-CSF on achievement of pregnancy as well as its effects on the endometrium. **Methods:** This was a retrospective cross-sectional study of a subgroup of women attending BioART Fertility Centre, who had two or more failed IVFs previously. These women underwent a procedure of transvaginal instillation of G-CSF in addition to their IVF protocol. Endometrial thickness was not a criterion for its use.

Results: The group consisted of 49 women, mean age 38.9 (SD ± 6.11). Mean number of previous IVFs were 3.1 (SD ± 1.76). Mean endometrial thickness pre-GCSF was 7.53mm (SD ± 2.69) and post-GCSF was 9.11mm (SD ± 2.12). The clinical pregnancy rate was 34.69%. Univariate analysis between those that achieved pregnancy and those that didn't showed that the age difference between the groups was statistically significant (p-value 0.0005). G-CSF use was associated with increased pregnancy rates in younger women. Mean endometrial thickness pre-and post-GCSF between the groups was not statistically significant (p-values 0.05). However, the mean change in endometrial thickness in all women regardless of pregnancy outcome was statistically significant (p-value 0.0029). **Conclusion:** G-CSF is a useful adjunct in the treatment of women aged less than 38 years with recurrent failed IVFs. We reported a statistically significant overall expansion of endometrial thickness with the use of G-CSF but failed to show any association between endometrial expansion and pregnancy outcome. **Key words:** G-CSF, IVF, endometrium, pregnancy.

P18-1232
UNUSUAL PRESENTATION OF UTERINE RUPTURE FOLLOWING LAPAROSCOPIC MYOMECTOMY: A CASE REPORT AND LITERATURE REVIEW

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Problem Statement: Laparoscopic myomectomy is preferred to the laparotomy approach as the former promises a better postoperative course, with fewer complications and faster recovery. It is increasingly performed in younger women in recent years. However, although rare, uterine rupture is an important and dangerous complication. **Case Introduction:** We report a case of 36-year-old lady who presented at 23 weeks and 4 days' gestation of an in vitro fertilization (IVF) dichorionic diamniotic twin pregnancy with spontaneous uterine rupture. Prior to presentation, her antenatal progress has been unremarkable. She underwent a laparoscopic myomectomy three years' prior for a 4.5cm fundal fibroid. Her presenting symptoms include acute onset of epigastric pain. Her vital signs were then stable and fetal heart sounds heard on Doppler. The initial impression was gastroenteritis and she was treated symptomatically. However, she developed hemodynamic instability and a fall in haemoglobin level. Uterine rupture was confirmed using Computed Tomography scan. She underwent an exploratory laparotomy and the placenta was found extruding from a 4cm defect on the posterior fundus along the previous myomectomy scar with active bleeding. **Discussion:** A recent systematic review analysed 23 studies in 2367 pregnancies after myomectomy and found the overall incidence of uterine rupture to be 0.6%; 0.67% after laparotomy myomectomy compared to 0.99% after the laparoscopic approach[1]. Current literature suggests it is difficult to predict when uterine rupture may happen. A systematic review compared antepartum and intrapartum uterine rupture and demonstrated that it was 1.52% and 0.47% respectively[1]. A rupture rate of 0.47% in women undergoing trial of labour with previous myomectomy is comparable to that of 0.5% in women with previous caesarean section[2]. Proper selection criteria for suitable cases may allow trial of labour after myomectomy to be a viable option. Potential considerations include interval between myomectomy and conception, scar integrity, method of repair, and the use of electrocoagulation. **Conclusion:** This case reports the worrying features of an early antepartum rupture presenting with atypical symptomatology. In pregnant patients presenting with abdominal pain or haemodynamic instability, it is imperative to consider uterine rupture to perform timely intervention. Those with a history of laparoscopic myomectomy should be considered high risk and counseled about the risk of rupture with extensive discussion about mode of delivery.

References:

Gambacorti-Passerini Z, Gimovsky AC, Locatelli A, Berghella V. Trial of labor after myomectomy and uterine rupture: a systematic review. Acta Obstet Gynecol Scand 2016; 95:724–734.

Royal College of Obstetricians and Gynaecologists (RCOG). Birth after previous caesarean birth. Green-top guideline no. 45. 2015. https://www.rcog.org.uk/globalassets/documents/guidelines/gtg_45.pdf (accessed 22 Aug 2016).

P19-1155
DELIVERY LATENCY AND PLACENTAL CORD INSERTION IN PRETERM LABOR WITH SINGLETON PREGNANCY

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Problem statement: Placenta with non-central cord insertion has a sparse chorionic vascular distribution, and it has markedly reduced transport efficiency. our aim is to compare of delivery latency in preterm labor women per their placental cord insertion. **Methods:** We conducted a retrospective study of placental characteristics in delivered women with singleton pregancy between 24-42 weeks of gestation. 110 women were delivered 37 weeks and 112 women were delivered at term (≥37 weeks). Velamentous cord insertion, twin, palcenta previa, abruptio placenta, fetal anomaly, uterine anomaly, and preterm birth (PTB) with medical or surgical indication were excluded. Peripheral insertion of umbilical cord (PIUC) was defined ≤ 3cm from placental edge. Multiple regression analysis was used for statistical analysis. **Results:** Cord insertion and PIUC were not significant difference between PTB and term birth (4.02±2.28 vs 4.96±2.57 cm, 4.6% vs 36.4%, respectively). However, PIUC had shorter delivery latency than non PIUC in preterm labor and preterm premature rupture of membrane (3.00±3.68 vs 9.82±17.2 day, p=0.031). Cord insertion was a significant factor for delivery latency (3.55±1.44, p=0.017). **Conclusion:** PIUC is associated with short delivery latency in preterm singleton pregancy. Placental cord insertion site should be evaluated at ultrasonographic examination of women with preterm labor.

P20-1249
THE EVALUATION OF THE FAMILY TREES OF PATIENTS DIAGNOSED WITH GESTATIONAL DIABETES MELLITUS REGARDING DIABETES

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Problem statement: Pregnant women with a history of diabetes mellitus in their families are in the risk group for gestational diabetes mellitus. **Purpose:** This study was planned to evaluation the first degree and close relatives of pregnant women who were diagnosed with gestational diabetes mellitus, and to evaluate their predilection for gestational diabetes mellitus. **Methods:** This descriptive and cross-sectional study was conducted between the months of July and December 2016 in a Women and Child Disease Research and Training Hospital in the city of Istanbul with the participation of 91 women who presented to the diabetes nurse for counseling, were diagnosed with gestational diabetes mellitus, and agreed to participate in the study. Data was collected through the completion of the questionnaires developed by the researchers via face to face interviews, and this data was then evaluated. The SPSS 21.0 program was used in the evaluation of research results. **Results:** The mean age of the 91 pregnant women in the context of the study who were diagnosed with gestational diabetes mellitus was 32.41±4,88, while their mean weight was 79,80±13,31 and their mean weight gain during pregnancy was 8.20 kg. Among the 91 patients who were not diagnosed with chronic diabetes 23.1% were primipara, and 34.1% of those who were multipara were found to be diagnosed with gestational diabetes mellitus in their previous pregnancies. 26.4% of the women were found to use tobacco before pregnancy, 11% were found to continue smoking, 47.3% to have a diet list for gestational diabetes, 37.4% were found to eat per their diets, and 63.7% were found to dominantly eat fruit and vegetables. 93.4% of the pregnant women were found to regularly visit for antenatal controls during pregnancy. When the presence of chronic diseases before pregnancy were checked, it was found that 78% had no chronic disease, 13.2% had thyroid related chronic diseases, 8.8% had other chronic diseases such as anemia and high blood pressure, and that 16.5% had a medicine they regularly used. Among the pregnant women who were diagnosed with gestational diabetes, 35.2% had diabetes in their mother, 36.3% in their father, 9.9% in their sister, and 7.7% in their brother. When the status of pregnant women with gestational diabetes regarding the presence of diabetes in their relatives from their mother's side was examined, the rate of having the disease in their relatives was found to be 51.6%. Among those, 16.5% had diabetes in their aunt, 15.4% in their uncle, 20.9% in their grandmother, and 8.8% in their grandfather. When the

status of pregnant women with gestational diabetes regarding the presence of diabetes in their relatives from their father's side was examined, the rate of having the disease in their relatives was found to be 58.2%. Among those, 27.5% had diabetes in their aunt, 16.5% in their uncle, 19.8% in their grandmother, and 7.7% in their grandfather. Only 17.58% of the women didn't have a diagnosis of diabetes in their relatives. **Conclusions:** When pregnant women with gestational diabetes were examined regarding a diagnosis of diabetes in their first degree and close relatives, pregnant women with diabetes in their father's side were found to be higher in number. Thus, such patients can be suggested to be monitored closely for gestational diabetes mellitus from the start of pregnancy. **Keywords:** Pregnant, Risk, Gestational Diabetes, Type II diabetes, Familial Predilection

P21-1303
WHAT IS THE PROGNOSIS OF WOMEN WITH POLYCYSTIC OVARIAN SYNDROME COMPARED TO OTHER WOMEN OF SIMILAR AGE IN FERTILITY UNITS?

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Problem statement: Polycystic ovarian syndrome (PCOS) is one of the main causes of sterility in women, because of its physiopathology associating ovarian dysfunction with oligo-ovulatory and anovulatory cycles. Ovarian steroidogenesis dysfunction often requires assisted reproductive techniques (ART) leading to characteristic ovarian response. PCOS is a multi-systemic entity associated to ovarian endocrinological disorder and long-term complications as type 2 diabetes, obesity and cardio-vascular complications. PCOSmay be associated with insulin resistance. Some of these women have higher levels of pro-atherogenic inflammatory mediators and unfavorable lipid, carbohydrate and lipoprotein profiles that mimic metabolic syndrome and that needs to be fixed before undergoing an ART procedure. **Methods:** We present a retrospective cross-sectional study set in the fertility unit (FU) in Hospital 12 de Octubre, Madrid. We recruited 204 women between January 2015 and June 2016. 102 were selected consecutively as they were diagnosed of POS according to Rotterdam criteria and constituted group 1. Group 2 was integrated by 102 control patients matched by age and enrolment on FU. Techniques performed were either intra-uterine insemination (IUI) or in vitro fertilization (IVF) depending on the patient's characteristics. Requirement to ART in our unit is to have an adequate metabolic status: body mass index (BMI)<30kg/m2 and glycemic/insuline levels and blood pressure within normal values. If those criteria are not met, dietary and exercise recommendations are given, and medical treatment started if necessary (antihypertensive or metformin). As a public hospital, ART are reimbursed, with limited indication criteria and 4-month delay to start IVF cycle and none for IUI. **Results:** Patients characteristics Previous abortion rate on the PCOS group was of 14.99%, mean(SE) BMI of 29.03(6.42) kg/m2, antral follicle count of 22.89(5.67) and FSH levels of 6.24(5.3) mIU/mL In group 2, previous abortion rate was of 23.99% and mean(SE) BMI was of 23.58(4.12) kg/m2, antral follicle count of 12.60(5.94) and FSH levels of 6.24(5.3) mIU/mL. Out of the 102 diagnosed of PCOS, 91(81.25%) needed measures to improve their basal metabolic status and only 55(49.1%) reached and adequate one to start ART. 34% had obesity (BMI>30) and 43% managed to lose 10% of their weight reaching an overall pregnancy rate of 39% (spontaneous and with ART) compared to 17% in those who didn´t. When ART technique was required; that meant 190.76(SE=147.6) days of delay to start, compared to 160.77(95.11) days in the control group where only 4,9% of the patients needed additional metabolic adjustment measures. When ART was allowed, 50.88% of PCOS patients started with IUI whereas IVF was preferred in 49.12%. Hyperstimulation rate (defined as need of a freezing all strategy) was of 4% and global pregnancy rate of 23.63%. On the rest of our patients, IAC was the starting ART on 21.56% and 78.44% started with IVF. Hyperstimulation rate was 1% and global pregnancy rate of 27%. **Conclusions:** Results on PCOS patients did not exceed those of the rest having longer waiting lists as most of them needed to reach an adequate basal metabolic status. Given that the metabolic basal status of patients with PCOS is key on the reproductive future of the woman as well as on the outcome of reproductive assisted techniques it is essential to educate younger teens to follow a healthy diet and exercise to meet the best basal status possible.

P22-1298
IMPACT IN CUMULATIVE PREGNANCY, LIFE BIRTH RATE, TIME TO PREGNANCY AND COSTS OF THE NUMBER OF OBTAINED OVOCYTES IN A PUBLIC HEALTH SYSTEM IVF PROGRAM

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Problem statement: Which should be the ideal number of ovocytes to reach better cumulative life birth rate, time to pregnancy and costs results in an IVF program? Response to controlled ovarian stimulation (COS) is related to pregnancy and life birth rate. Considering the number of obtained ovocytes patients could be classified as low (0 to 3 ovocytes); sub-optimal (s4 to 9); normo (10 to 15) or high (15) responders. Cumulative pregnancy rate is a more realistic measure the effectiveness of an IVF cycle as frozen embryos may give extra-chances of pregnancy and a freezing all policy can avoid OHSS risk. In a public center, with a long waiting list and financial limitations, it seems important to evaluate global costs, time to pregnancy and effectiveness of ovarian responses. **Methods:** This is a retrospective observational study of 528 IVF cycles performed in Human Reproduction Unit, O & G Department, 12 de Octubre Hospital in 2015. Frozen cycles derivate from the initial COS where considered for cumulative pregnancy rate when all embryos had been thawed for transfer. Patients were divided in 4 response categories: low, sub-optimal, normo or high responders (LR; SR; NR; HR) per the number of collected ovocytes regardless of the COS protocol. It is a public health institution where couples with primary infertility are accepted under 40 years for the woman with no economical charge for the patient. Transfer was performed at cleavage state; Freeze all policy was recommended in case of risk of OHSS and decided per specific patient and cycle characteristics; with a slow freezing technique. Costs were analyzed for OHSS needing hospitalization (as no other complication appeared) and for differed transfer cases. **Results:** 21,59% patients were LR with 0 to 3 oocytes, 46,59% SR, with 4 to 8, 24,81% NR, with 9 to 14 and 7,07% HR with more than 15. Basal patient´s characteristics were significantly different regarding age, antral follicular count, basal FSH and male factor incidence. Most cycles used antagonist GnRH protocols, but doses of FSH and LH effect needed, were significantly higher in lower responses. Pregnancy rates (PR) and life birth rate (LBR) per transfer were 22,08% and 20,78% in LR, 38,42% and 27,09% in SR; 43,64% and 34,54% in NR and 68,7% and 56,2% in HR. Because there was significant increase in the number of differed transfer (0,93% vs 4,94% vs 12,5% vs 57,14%), PR and LBR per cycles although significantly favorable to good responders, showed lower differences. Nevertheless, OHSS incidence significantly increased with ovarian response. Cumulative pregnancy rates were 22,08% in LR; 34,01% in SR; 50% in NR and 88,57% in HR (p=0,0001) whereas time to pregnancy was 28,47 +/-1,58 days in LR vs 34,83+/-40,13 in SR, 55,92 +/- 81,42 in NR and 162,19 +/- 138,52 in HR (p0,0001). Costs analyses considering drugs, complications and need of differing embryo transfer was inversely correlated to ovarian response (p0,05). Limitations, reasons for caution: Analyzing retrospective data may be source of imprecisions. Time to pregnancy is to be considered with caution, as non-medical factors were included. Similarly, cost analysis was limited to main expenses. Besides, if more severe case of OHSS appeared, needing intensive cares assistance, cost analyzes could dramatically change. **Conclusion:** This study gives updated prognoses information to patients, showing than the more ovocytes the best pregnancy expectations. Cumulative pregnancy rates favor good responder patients, with overall costs inferior to other patients besides segmented cycle increased incidence and persistent risk of OHSS.

P23-1369
INFLUENCE OF POST-THAW CULTURE ON THE CLEAVAGE STAGE EMBRYO DEVELOPMENT AND THE PREGNANCY RATE/H4

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Problem statement: Cryotransfers success rate is related with many known factors like embryo quality, maternal age, number of transferred embryos and implantation potential determinate by blastomere survival and embryo development. Many authors have related mitotic resumption with better prognosis and stop embryo development with lower success. Overnight culture is an extended procedure for the frozen embryo transfer (FET) but the in vitro culture conditions may not exactly replace the physiological

environment. In the other hand, short embryo culture (2-4 hours), which is also common, could be associated with a higher percentage of no mitotic resumption embryos transferred. **Methods:** During 2014-2016 period, 244 freezing-thawing cycles were performed at the Human Reproduction Unit of Hospital Universitario 12 de Octubre, Madrid, Spain, in a public IVF programme without egg-donation. 182 Patients who underwent cryotransfer cycles after IVF were included and only patients with uterine anomalies were excluded. All the studied embryos were freeze and thaw with the slow protocol and transferred only when ≥ 50% of the initial number of blastomeres remained intact. Three study groups with different freezing day and culture conditions were compared regarding pregnancy rate. 130 cycles had freezing, thawing and transfer on day 3 (group 1), 56 on day 2 (group 2) and 59 had freezing and thawing on day 2 and transfer on day 3. Transfers were performed when the endometrium reached 8 mm after hormonal replacement treatment with oestragens/progesterone. Clinical pregnancy was defined by the presence of a gestational sac on ultrasound examination. **Results**: Daily laboratory programme rules the embryo thawing protocol election per assistance requirements to ovoid overcrowded activity. We select between a few hours' culture (2-4h) and an overnight culture (20-24h) because nowadays we still haven't found a standardized criterion about the effectiveness of one strategy over another. The maternal age at ovarian pick-up, embryo quality and post-thaw embryo survival rate were not statistically different between groups (p0, 01). Although no differences could be detected in those determining factors, outcomes are clearly influenced by the culture period. Pregnancy rates per transfer were statistically different between groups (p=0,005): 25, 23% (group 1), 33, 33% (group 2) and 7, 55% (group 3). This retrospective analysis indicated that short post-thaw culture period is associated with higher pregnancy rate. As consequence, our results support the survival blastomere rate as the most determining factor to select embryos for transfer while longer post-thaw cultures are a charge extra for the laboratory and don't seem to be particularly benefit in terms of pregnancy rates. **Conclusion:** As no advantage, could observed after overnight day 2 to day 3 post-thawing embryo culture, short culture (2-4 hours) appears to be the best option in terms of pregnancy rates. Low number of cycles and the retrospective nature of the design are main limitations of our study. The support of prospective randomized studies is needed to validate this hypothesis. Besides, subgroup analyses considering intention to treat, culture embryo arrest and need of extra-embryo thawing could add more precise conclusions.

P24-1372
COMPARISON OF TWO SPERM PROCESSING TECHNIQUES FOR ICSI: SPERM SWIM-UP AND DISCONTINUOUS DENSITY GRADIENT CENTRIFUGATION

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Problem statement: Usually sperm capacitation in assisted human reproduction is performed in IVF laboratories using two specific techniques trying to imitate the in-vivo female genital track capacitation. The method is selected per the sperm quality sample and the final ART procedure. The effectiveness of one sperm preparation procedure over another is still a controversial as many different procedures have been compared in heterogeneous conditions. The elected technique will be selected considering results laboratory management implications. **Methods:** This is a retrospective study, of 357 semen samples capacitated for ICSI procedure at the Human Reproduction Unit of Hospital Universitario 12 de Octubre, Madrid, Spain, in a public IVF programme in 2015-2016 period. The capacitation technique used divided our study in two groups: 170 samples were processed using swim-up and 187 with discontinuous density gradient (Nidacon Internacional, Flöjelbergsgatan 16 B 431 37 Möindal, Sweden). Seminal parameters were analyzed before and after processing. During 2015-2016 period, 357 semen samples were capacitated at the Human Reproduction Unit of Hospital Universitario 12 de Octubre, Madrid, Spain, in a public IVF programme. All of them were used in ICSI procedure. The capacitation technique divided our study in two groups indistinctly, 170 samples were processed using swim-up and 187 with discontinuous density gradient. Seminal parameters were analyzed before and after processing. **Results:** Improvements of the concentration of motile sperm were observed with both used techniques. Discontinuous density gradient centrifugation improved concentration recovery rate reaching statistically higher levels than swim-up procedure (13,51 x 10^6/ ml vs 8,16 x 10^6/ ml) ($p \leq 0,01$). This marked difference respecting the concentration sperm recovery, doesn`t affect other cycle variables analyzed: fertilization rate (61,88 % vs 59,75%), number of embryos per patient (2,36 vs 2,36), good quality embryos per patient (0,94 vs 0,85) (p 0,01). Neither pregnancy rate nor implantation rate per transfers were affected by the sperm processing technique (30,00 % vs 26,27%; 22,92% vs 17,64 % respectively) (p 0,01). Per our results the discontinuous density gradients do not improve ICSI outcomes even though a significant increase in concentration of motile sperm rates made evident. In conclusion, using discontinuous density gradient is not justified in semen samples for ICSI even though ART in which higher post-processing concentration of motile sperm rates is required could benefit of this procedure like IUI. **Conclusion:** When only a few spermatozoa need to be selected, as it is the case in ICSI technique, sperm selection with discontinuous density gradients has no effect in cycle outcome parameters. Election of sperm processing technique for ICSI should be based on other kind of parameters: availability, costs, lab organization, etc. Number of cycles and the retrospective nature of the design are main limitations of our study; it would be interesting to study longer series of patients that support our findings, ideally in a randomized controlled prospective design. Similar analyses in subgroups of sperm quality different conditions may show different results.

P25-1371
CLINICAL SIGNIFICANCE OF ATYPICAL SQUAMOUS CELLS OF UNDETERMINED SIGNIFICANCE IN DETECTING PREINVASIVE CERVICAL LESIONS IN PRE-AND POST MENOPAUSAL ALBANIAN WOMEN

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Background: To evaluate the clinical significance of atypical squamous cells of undetermined significance (ASCUS) in PAP test in post-menopausal women and compare with pre -menopausal women. **Methods**: A total of 500 patients who referred to our gynecologic clinic in "Mbreteresha Geraldine" Hospital, Tirane, Albania, were included to the study between January 2012 and August 2014. Data for 194 post-menopausal (group 1) and 306 pre-menopausal (group 2) women with ASCUS cytology were evaluated. **Patients interventions:** Immediate colposcopy and endocervical curettage was performed for both groups and conization for all women with a result suggestive of CIN 2-3. HPV –DNA were assessed for all woman. **Main outcome measures**: Histopathological results and demographic features of patients were compared between the two groups. Results: Mean age of the patients was 54.6±6.5 years in group 1 and 38±6.6 years in group 2. Some 19 (9.4%) of post- menopausal women and 49 (15.9%) of pre-menopausal women were current smokers. No one was suffering from another disease. Totals of post-menopausal and pre-menopausal women were assessed for HPV-DNA. HPV –DNA testing was performed by polymerase chain reaction (PCR) with pU1M/pU2R primers in GENOMA Laboratory, Rome, Italy. High risk HPV was detected in 27 (14 %) and 85 (28 %), respectively (p=0.029). Final histopathological results recorded were normal cervix, low grade cervical intra-epithelial neoplasia (CIN 1), and high grade cervical intra-epithelial neoplasia (CIN2-3). In group 1, results were 84.8%, 12.2% and 1.8%, respectively, and in group 2 were 71.9%, 23.2% and 4.9%. Two cases were detected as micro-invasive carcinoma in pre-menopausal group (1%). Two cases were detected as endometrial carcinoma in the menopausal group (0.6 %). **Conclusions:** In the current study, we found that preinvasive lesions were statistically significantly higher in pre-menopausal women than post-menopausal women with ASCUS. High risk HPV were significantly higher in pre-menopausal women. Cervicitis was more common in menopausal women.

P26-1380
INCIDENCE OF PREECLAMPSIA IN ALBANIAN WOMEN, ESTIMATED IN "MBRETËRESHA GERALDINË" HOSPITAL IN PERIOD 2015-2017

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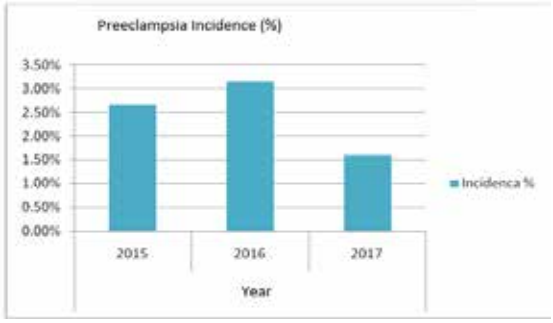
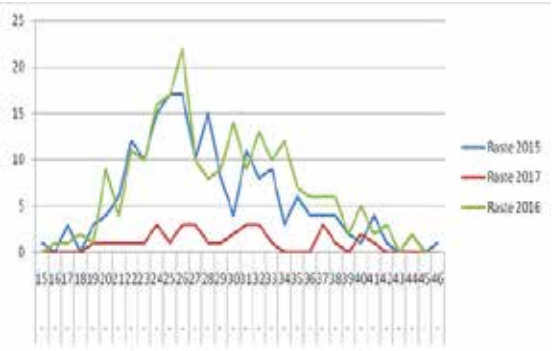
Introduction: Preeclampsia is a hypertensive disorder with a multi-organ affection, that affects 3-5% of all pregnancies. Preeclampsia is a major cause of maternal morbidity and mortality, preterm labor, perinatal mortality and foetal hypertrophy. **Methods and patients:** We carried a retrospective study at "Mbretëresha Geraldinë" Maternity Hospital, by calculating statistically all the births of women with Preeclampsia that gave birth at "Mbretëresha Geraldinë"

Maternity in, year 2015, 2016 and January-March of 2017. 432 pregnant women with Preeclampsia were followed up. After a meta-analysis, we established the incidence of this disorder in Albania, how women's age affects the incidence of Preeclampsia, the distribution of this incidence between primiparous and multiparous women, the incidence of Preeclampsia related complications in pregnant women, maternal morbidity and mortality and foetal mortality, foetal prematurity and its birth weight. **Results**: The incidence of Preeclampsia in 2015 was 2.66%, in 2016 it was 3.14% and so far, in 2017 it is 1.6%. The most common age group between women hospitalized because of Preeclampsia related disorders, for the 3 years considered, is 25 and 26 years old. Regarding the incidence of Preeclampsia, there is a higher incidence in younger pregnant women (15-18 years old) and older women (37-41 years old). The highest incidence, in 144 births, is estimated in primiparous women with Preeclampsia. A lower incidence is noticeable in pluriparous women, with the percentage lowering with every birth. From statistical evidences, the highest percentage of gestational age is the one on full term; specifically, 161 women gave birth on time (36-42 gestational week) for year 2015, 182 women for year 2016 and 30 women for January-March period in 2017. **Conclusions**: Preeclampsia is a rare pregnancy related disorder, with an unpredictable course, that can be fatal for the mother and the child. The incidence of the disease in "Mbretëresha Geraldinë" Maternity, in the years that we took into consideration, was approximately 2.6.





P27-1243
OPTIMAL ECONOMIC EVALUATION IN FERTILITY PRESERVATION WITH SPRMs

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Problem statement: Women wishing to preserve fertility in anticipation of a pregnancy may undergo a pre-pregnancy surgical intervention followed by recovery period which impacts attempt to conceive. Selective progesterone receptor modulators (SPRMs) are recently approved therapeutic alternative therefore judgment about cost-effectiveness of SPRMs should be based on optimal decision and consider the inevitable uncertainties within an economic evaluation. **Materials and methods:** An investigator-driven assessment of cost-effectiveness compares the use of SPRMs vs. no treatment in fertility preservation. Women in the comparator arm may or may not undergo elective and/or re-surgery, excluding hysterectomy and artery embolization. In the treatment arm no concomitant medication is included. All costs are determined based on the payer's perspective, without indirect costs, adverse events and absenteeism. EQ-5D utility weights, i.e. pain (VAS) and bleeding (PBAC) levels for each treatment are used to assess quality of life. Main endpoint is the incremental cost-effectiveness ratio (ICER) per a quality-adjusted life year (QALY) gained as the most widely recommended tool cost-effectiveness evaluation. **Results:** The use of SPRMs increases quality of life and gains an average 0.04 QALY while modestly raising costs. As costs per interventions vary from country to country, once adapted from hospital episode statistics database or other official sources, the result for ICER per QALY may well be below either the fixed treshold of 20-30 000 € or the WHO CHOICE recommendation for a 3 times GDP level. However, for countries with middle or less income, ICER per QALY can be too high if such treshold is binding in economic evaluation. **Conclusion:** Judgements about which medications are cost-effective based only on cost per QALY are potentially counterintuitive. QALY paradigm, called also "QALY *egalitarisme*" is empiric by nature, reacts merely on discounts and not reflecting the distribution of health effects. In a societal sensitive area, such as fertility preservation, this may entail negative decisions likely to reduce access to effective treatment and exacerbating inequalities, especially in countries with low and middle income.

P28-1522
EFFECTS OF SYNTHETIC KISSPEPTIN AND ITS ANALOGUES ON CELL LINES OF MALIGNANCIES OF FEMALE REPRODUCTIVE SYSTEM

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Kisspeptins are peptide products of *KISS1* gene are known by their anti-metaststic and tumor-suppressive effects in various carcinomas. The ability of kisspeptin to inhibit the migration of trophoblast cells was shown *in vitro*. Synthetic kisspeptine already used to stimulate ovulation in IVF cycles and its anticancerogenous effect could open a new opportunity to cure the cancer. In this study two analogues of kisspeptin-10 (KP-10) was synthesized, they difference from endogenous form was in replacement of the seventh glycine to D-alanine (KP-Ala) and D-tryptophan (KP-Trp). It is assumed that such modification increases the affinity of kisspeptin to its receptor (KISS1R) and eliminates the site of hydrolysis by matrix metalloproteinases, thereby prolonged half-life of a hormone. The aim of the study was to identify the KP-10 and its analogues effects on proliferation and apoptosis of human breast tumor cell line (BT-474 and MCF-7) and human uterine leiomyosarcoma cell line (SK-UT-1B). **Materials and methods**: Cell lines were cultured with addition of KP-10, KP-Ala and KP-Trp in concentration 10^{-7}M. After 36 hours of incubation they were fixed in paraformaldehyde and analyzed by immunofluorescence technique to estimate proliferation rate (anti-Ki-67, 1:75, Dako) and level of apoptosis-associated proteins (anti-Bcl-2, 1:100, Novocastra; anti-p53 1:50, Dako, anti-caspase-3 1:400, Abcam, anti-caspase-8,-9 both 1:500, Dako). KISS1R-negative HeLa cell line were used as a control. **Results:** All kisspeptins significantly increased p53 level in all KISS1R-posistive cell lines. Moreover, the reduced cell number and activation of caspase-3 and -9 in SK-UT-1B line was observed, whereas similar effect was provoked only bu KP-Trp in BT-474. By influence of Kp-10 and KP-Trp caspase-8 was activated in all types of tumor cells suggesting stimulation of apoptosis by death receptors like Fas. KP-Ala shows anti-proliferative effect in all groups. In case of MCF-7 cells kisspeptins caused the increase of p53 immunohistochemical expression without decrease of Bcl-2 protein and concomitant induction of apoptosis. **Conclusion:** Kisspeptin-10 and two analogues have proapototic and antiproliferative effect on tumor cell lines of female genital tract. The synthetic hormones affect cell lines in different manner it could be associated with sensitivity to estrogen, which is known for its antiapoptotic effects. KP-Trp showed the highest proapoptotic effect in cell culture.

P29-1561
DID BREAST SURGERY CHANGE ACCORDING TO THE GUIDELINES? AN INTERNAL AUDIT FOCUSING ON THE SURGICAL OUTCOME

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Problem statement: Over the last decade the recommendation for the tumor free margins has come down from 10mm to `no ink on tumor`. A similar development can be seen with the axillary lymphnode dissection (ALNE). At the end of the last millenium more removed lymph nodes were thought to be more beneficial to the

survival of the patient. The introduction of the sentinel node biopsy (SNB) and further studies resulted in the current discussion if an ALNE is still necessary in certain circumstances. Our internal audit analysed over time the surgical quality variables `tumor free margins`, `re-resection rate` and `number of lymphnodes for SNB and ALNE`. **Methods:** Retrospective database analysis over a 10year period in our breast centre. Inclusion criteria were primary diagnosed breast cancer, final R0 resection and breast conserving surgery. **Results:** Figure 1 provides information regarding the number of cases, R1-rate and average tumor free margin over time. The tumor free margin increases over the first years as the gold standard was 10mm but consecutively drops as publications and guidelines reduce. The rate of R1 resection peaks parallel to the tumor free margins and then also comes down to around 20% which is about the average over the time period. The rate of SNB increased also parallel with the broadening indication up to 63% (Figure 2). The conversation rate of SNB to ALNE drops in the last 2 years. The number of removed lymphnodes – as marker for long term post surgical problems – has been stable for SNB (min 1,8 LK; max 2,4 LK) and reduced over time for ALNE (min 11 (2013); max 20,6 LK (2006)) as shown in figure 2. **Discussion:** The implementation of surgical guidelines can be seen over time in the annual statistic of our breast center. Parallel to the recommendations the tumor free margin doubled and then dropped again. The increase of the tumor free margin triggered a higher re-resection rate to fullfill these criteria. Currently with `no-ink-on-tumor` the re-resection rate is on the long-term average. More importaintly from a patients' viewpoint in terms of complications is the stable number of removed SN over time. This shows that SN can be identified clearly and regularly. Parallel to the current scientific discussion our data shows that surgeons have started to become less radical in ALNE. Interestingly the rate of SNB conversion to ALNE also drops which may be due to the improved diagnosis in axillary ultrasound and core needle biopsy. **Conclusion**: Our data shows that current surgical guidelines are slowly implemented in clincial day care and the effects can be seen over time. The next step should be the evaluation of the time from publication of new guidelines to the clinical implementation.

Figure 1: *Overview of the variables over time with number of primary breast conserving breast cancers (BET-Fälle), R1-rate after primary surgery (%) and average tumor free margin (mm).*

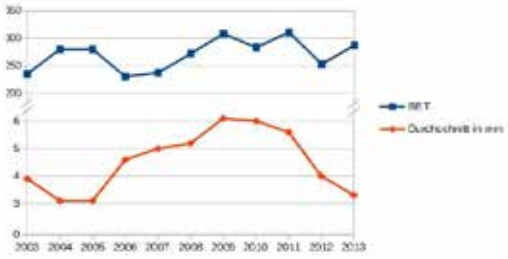
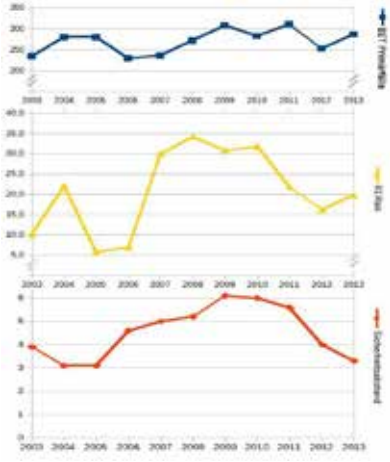


Figure 2: *Overview of lymphnode variables with graphics for rate of SNB (%), number of removed LN at SNB (Ø LK SNB), at axillary dissection (Ø LK ALNE) and rate of positive LN leading to an ALNE (%; SNB-ALNE).*



P30-1286
FACTORS IMPAIRING THE SUCCESS OF OUTPATIENT DIAGNOSTIC HYSTEROSCOPY – THE EXPERIENCE OF OUR CENTER

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Problem statement: Outpatient hysteroscopy is a minimally invasive procedure, largely used to investigate abnormal uterine bleeding (AUB) and other pathologies in both premenopausal and postmenopausal women. This procedure has many advantages such as its high success rates, good pathology detection, diagnosis and, eventually, treatment. Several studies have shown that office hysteroscopy by the vaginoscopic approach is a well accepted and tolerated procedure and has, in most of the cases, no need of analgesia or pain medication after the procedure. Moreover, it has a limited failure rate (less than 4%), mostly due to patient pain intolerance. Among the predictors for unsuccessful hysteroscopy described in the medical literature are nulliparity and postmenopausal status. The aim of this study is to assess factors impairing the success of outpatient hysteroscopy in our hospital. **Methods:** A retrospective observational study was conducted, including all the patients who underwent an outpatient hysteroscopy during 2016, at Centro Hospitalar do Algarve – Faro. We included all the 177 patients. Statistical analysis was performed via χ^2 test or logistic regression. *P* value 0.05 was considered statistically significant. All statistical calculations were performed using SPSS® v20.0. **Results:** One hundred seventy-seven outpatient hysteroscopies were undertaken using the vaginoscopic approach with 4-5mm diameter instruments. Premedication for cervical preparation was given to the patients for self-aplication the night before. In our sample, the average age was 54.5±11.9 years. The most frequent indication for the exam was AUB (108 cases), followed by asymptomatic endometrial thickening, Intrauterine Device and infertility. Ninety-four women were postmenopausal (53.1%), 31 never had a vaginal delivery (18.1%), 62 (36.3%) were obese, 71 (41.3%) had hypertension, 17 (9.9%) had diabetes mellitus type 2. Our failure rate was 15,8% (28 exams), being cervical stenosis the main cause for unsuccessful exam. In 3 cases, the exam was halted due to pain intolerance. Our study suggests that there is a correlation between premenopausal status and AUB (favoring the success of the procedure), while no significant correlation was found between age and parity. Moreover, there were no registered complications due to the procedure itself. **Conclusions:** This study enhances our understanding on relevant patient factors impairing the success of outpatient hysteroscopy, allowing us to do better patient counseling. Future studies should focus on strategies to improve the success of this technique.

P31-1392
NAUSEA AND VOMITING IN PREGNANCY - NOT ALWAYS WHAT IT SEEMS

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Problem statement: Nausea and vomiting are common symptoms in pregnancy, affecting 50-80% of pregnant women. The most severe form is called *hyperemesis gravidarum.* It occurs in 0,5-3% of pregnant women and presents with incoercible vomiting, weight loss exceeding 5% of the pre-pregnancy weight, dehydration, ketonuria, hypokalemia. However, when facing a pregnant patient complaining of vomiting, the diagnosis of vomiting associated with pregnancy or hyperemesis is one of exclusion. When there are atypical signs and/or symptoms, there should be a more in-depth examination, to exclude other causes and determine if they are associated with pregnancy or not. **Methods:** case report. **Case report:** We report the case of a woman diagnosed with nausea and vomiting associated with pregnancy during the first trimester of pregnancy. On a second emergency episode in which she complained of nausea, vomiting and frontal headache she was hospitalized. She had signs of widespread malaise, excessive sweating and pallor. Her blood analysis was normal. However, she was admitted to the Obstetrics department for surveillance and symptomatic therapy. The same day she had seizures and was diagnosed with a cerebral neoplasia on a CT scan. She died few hours later despite the instituted medication. *Hiperemesis gravidarum* and infectious gastrointestinal diseases are the most common causes of nausea and vomiting in first trimester of pregnancy. However, we must consider the neurological/neurosurgical complications that can arise in this clinical context. The most common neurologic complications in pregnancy

are those secondary to arterial-venous malformations, aneurysms and preeclampsia. Brain tumors, however, are rare and, often, their diagnosis is delayed by the similarity of its symptoms with those of a normal pregnancy or its complications, such as headaches, nausea, vomiting, visual disturbances (due to mass effect). Nausea and vomiting associated with normal pregnancy tend to improve later in pregnancy, on the opposite those associated with brain tumors, may arise later, tend to worsen gradually, and may coexist with symptoms such as headache, visual disturbances or focal neurological deficits. It is known that pregnancy does not alter the incidence of brain tumors and their prevalence reflects the same age group in the general population. However, hemodynamic and hormonal changes during the pregnancy may accelerate tumor growth at this stage, with the possible worsening of the signs and symptoms. **Conclusion:** This case displays the importance of a careful and critical approach to every pregnant woman. One should consider several differential diagnoses and to pay attention to the atypical signs and symptoms. The multidisciplinary discussion is also of crucial importance. In the case of brain tumors, early diagnosis can make a difference in the prognosis.

P32-1234
COMPLICATIONS OF A MULTIPLE GESTATION – A CASE OF SPONTANEOUS QUINTUPLETS

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Problem statement: Multi-fetal pregnancies present a great risk for both the mother and the developing embryos with a seven-fold greater maternal morbidity in multiple pregnancies as compared to the singletons. Multiple gestations are often associated with assisted reproductive technologies (ART) and must be regarded as a serious adverse event. More than 30% of pregnancies using ART in the developed countries are twin pregnancies or higher order multiple gestations (triplets or greater). Spontaneous multiple gestations, however, are very rare event with the natural incidence of triplets in the United States of 1 in 7925 pregnancies. Quadruplets are even more rare with the incidence of 1 in 600 000 pregnancies while the quintuplets probably occur only once in 15 to 20 million deliveries. **Methods**: A case of 33-year-old Caucasion woman, G3P2, with two previous vaginal deliveries are presented, where a quintuplet pregnancy was diagnosed on a rutine ultrasound examination. To collect all the necessary data, a full obstetric and ultrasound examination, the blood tests and the interview with the patient were performed. **Results**: A 33-year-old pregnant woman with her third pregnancy (8 weeks) was admitted to the Cantonal Hospital Zenica at the Departent of Obstetrics and Gynecology with the diagnosis of multiple pregnancy, fatigue, fever and vomiting. Patient`s history revealed previous 2 spontaneously conceived pregnancies, no history of polycistic ovary syndrome (PCOS), no fertility problems and no multiple gestations in her family. Emergency blood count: Er-4,70, Hgb-14,1, Hct-0,39, MCV-83,5, MCH-30, MCHC-36, WBC-11,75, CRP-161, PLT-213, PT(s)-12,4, PT-95, INR-1, APTT-38,5, TT-13,8. Detailed ultrasound examination revealed 5 gestational sacs in utero with 1 embryonic echo and 1 barely visible yolk sac suggesting a potential superfecundation. Furthermore, anamnestic data revealed that repeated ultrasound examinations have allegedly shown an additional yolc sac every time the ultrasound was performed. However, fetal heart rate (FHR) has not been recorded with the consequent diagnosis of missed abortion. Patient underwent dilatation and evacuation along with the antibiotics treatment and was discharged from the hospital the next day. **Conclusion**: The aim of this case report is to show the possibility of spontaneous quintuplet pregnancy in a patient with no previous fertility problems and a potential superfecundation based on a different ultrasound images on a few repeated examinations. However, due to the patient`s infection and the well-known risk of multifetal pregnancies, this pregnancy ended in the first trimester. Patient was advised for the further evaluation of her gynecological and hormonal status before the next pregnancy because of these spontaneous quintuplets.

P33-1138
POSSIBILIY OF USING SUPEROXIDE DISMUTASE AND GLUTATHIONE PEROXIDASE AS ENDOMETRIOSIS BIOMARKERS

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Objective: To study the possibility of identifying a pre-operative biomarker for endometriosis. **Material and methods:** The subjects were female patients aged between 18-45 years old who came to Gynecology outpatient clinic, Thammasat university hospital during September 2013 to 2016 with the complaint of gynecologic symptoms suspected of endometriosis. Those with positive endometriosis diagnosis by laparoscopy were recruited. All patients underwent operation via laparoscopy. Final diagnosis was all confirmed with histopathological report. The control group was healthy females of reproductive age who came to outpatient clinic. Blood sample was drawn and plasma was saved at -80ºC. The activity of superoxide dismutase (SOD) in plasma was measured using a tetrazolium salt for detection of superoxide radicals generated by xanthine oxidase and hypoxanthine. The plasma glutathione peroxidase (GPx) activity was measured using a kinetic colorimetric assay that measured activity indirectly by coupled with glutathione reductase (GR). A receiver operating characteristic curve (ROC) was generated for plasma activity of SOD and GPx. The cutoff values then were selected at the most appropriated sensitivity and specificity. The area under the curve between the two tests was compared and test for statistical significance. **Results:** All 42 cases were included in this study. Mean age of endometriosis and control groups were 33.1 and 28.6 years old, respectively. The SOD cut point was chosen at 6.0 nmol/min/ml. The appropriate cut point of the relationship between sensitivity and 1-specificity was chosen at 466 nmol/min/ml. The sensitivity and 1-specificity were calculated for the approximate cut point again; the accuracy was 78%. **Conclusion**: A combination tests of SOD and GPx can probably be used as preoperative biomarker for endometriosis.

P34-1526
THE LEVEL OF CYTOKINES IN THE PERITONEAL FLUID IN WOMEN WITH EXTERNAL GENITAL ENDOMETRIOSIS

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Endometriosis is one of the most frequent gynecological diseases of women of reproductive age, which is accompanied by an inflammatory reaction. Particular attention is paid to the study of the role of peritoneal fluid in the development of endometriosis, since it is this medium that directly contacts endometrioid heterotopia. **The aim of the study**: To examine the pro-IL-2, IL-6, IL-8, TNFα content and anti-inflammatory (IL-4, IL-10) cytokines in a peritoneal fluid to clarify the inflammatory process in external genital endometriosis (EGE). 38 women with EGE were examined. 29.2% of patients had grade I endometriosis, 54.2% had grade II and 16.6% had grade II-III.14 women who sought diagnostic laparoscopy for pregnancy planning without signs of endometriosis were control group. The diagnosis of EGE is established on the basis of endoscopic data and the results of histological examination. The severity of EGE was estimated by classification R-AFS. The peritoneal fluid was collected during

laparoscopic operations. The level of cytokines was determined by the ELISA method using the "cytokine" test systems (SPb, Russia). All women presented typical for genital endometriosis complaints of dysmenorrhea and pelvic pain. Studies have shown that the level of IL-6 in the peritoneal fluid of patients with EGE was higher than in the control group (20.4 ± 1.2 pg / ml versus 11.6 ± 1.05 pg / ml in the control) and was higher with EGE I-II degree of severity in comparison with EGE III-IV severity (23,8 ± 1,1 pg / ml). The content of IL-10 in the peritoneal fluid was higher at grade III-IV than in the I-II severity level and in the control group. The level of IL-4 and IL-8 in the peritoneal fluid in patients with EGE was higher than in the control group and correlated with the severity of the disease. And the levels of IL-2 and TNFα in the peritoneal fluid in EGE patients were sharply reduced. The obtained data testify to the unquestionable participation in the development and progression of EGE cytokines, both pro-inflammatory and anti-inflammatory, that ensure the invasion of endometrial cells, the growth of endometriotic foci, the formation of a microcirculatory bed, the induction of inflammation. Consequently, the immunological changes in the peritoneal fluid are due to the already formed foci of endometriosis.

P35-1527
RESULTS OF A CLINICAL STUDY ON THE USE OF DYSMENORM IN TREATMENT OF PATIENTS WITH FIBROCYSTIC MASTOPATHY (FCM)

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As you know in the pathogenesis of diseases such as premenstrual syndrome (PMS), and dysmenorrhea and FCM lies the disregulation of the hypothalamic-pituitary-ovarian system (HPOS). To date, the Dysmenorm, which contains extract of the Agnus Castus with Pulsatilla pratensis and Apis melificca is successfully used in the treatment of PMS and dysmenorrhea. But until now no study has been conducted on its use in FCM. Having regard to the foregoing, the purpose of this study was to study the work of the HPOS in treatment of patients with FCM and to take measures for its correction by using the Dysmenorm drug. During 2 years from 2015 to 2017, we conducted a randomized “case-control” study on the basis of the City Perinatal Center and City Maternity Hospital No. 3 in Tashkent on the use of Dysmenorm in patients with various forms of FCM. The study included only 53 patients of reproductive age (from 18 to 41 years) (average age 26.3 years) with various forms of FCM, verified by ultrasound examination of the mammary glands. 20 patients from them were diagnosed with fibrotic mastopathy, 23 - FCM, and 10 - with nodular mastopathy. The age of detection of mastopathy averaged 2.6 years. A study of breast cancer heredity showed that the mother`s breast cancer was found in 15 women, which was -28.3%, while 9 women (17.0%) had sister's breast cancer. Nearly half of the women had a pathology of the thyroid gland (45.2%). 9 women (37.5%) had euthyroid status, 15 women (62.5%) had a thyroid insufficiency. The decrease in thyroid function was due to both hypothyroidism (46.7%) and autoimmune thyroiditis (53.3%). The body mass index of 13 women of the study group increased by more than 30 and it was 24.5%. Among gynecological diseases, often women suffered uterine myoma - 26 (49.0%), hyperplastic processes of the endometrium -17 (32.1%) and vulvovaginitis-16 (30.2%). The results of the basal level of the hormones of patients on 3-5 days of the menstrual cycle showed reliably increase such hormones as thyroid-stimulating hormone -15 (28.3%), prolactin -17 (32.1%), antibodies to thyroglobulin -3 (5.7%) and pyroxidase -5 (9.4%), as well as estradiol-7 (13.2%), while FSH-20 (37.7%) and LH-7 (13.2%) significantly reduced. Rates of free thyroxin - 10 (18.9%) and progesterone - 41 (77.4%) tended to decrease. As a result of the research, we had 34 women with positive effect in clinical indicators and ultrasound control, which constitutes 79%. Positive clinical effect without improvement of ultrasound indicators was observed in 9 women, which constitutes 21%. Thus, FCM is a disease that has a high correlation with heredity, in terms of breast cancer. For conservative therapy of FCM, a significant clinical effect is achieved when using Agnus Castus with Pulsatilla pratensis and Apis melificca which is presented in “Dysmenorm “(tablets № 80).

P36-1088
DENOSUMAB AND CANCER CELL MIGRATION

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Denosumab, a human monoclonal antibody to receptor activator of nuclear factor-κB ligand, suppresses bone resorption and a potential treatment for bone destruction in metastatic cancer. Denosumab may have an additional effect on cancer than the previously demonstrated bone-protective effects. Explanations for the possibly longer survival with denosumab treatment in cancer patients include both indirect and direct effects on tumor cells. An indirect effect may derive from the symbiotic relationship between tumor cells and the bone marrow in which both bone destruction and tumor growth are stimulated. In this relationship, tumor cells secrete different factors that promote production of RANKL.The increased expression of RANKL in the tumor environment leads to increased formation and survival of osteoclasts and results in osteolytic lesions. Osteolysis results in the release of growth factors derived from bone. These growth factors increase the production of parathyroid hormone-related protein or directly promote tumor growth. Another hypothesis is that denosumab may improve survival by directly inhibiting RANKL on RANK-expressing tumor cells, which has been demonstrated also for breast cancer cells in vivo and for several other tumor cell lines like lung cancer cells in vitro. RANKL inhibition may have a direct antineoplastic effect on lung cancer cells via apoptosis activity. Bone destruction increases local extracellular calcium concentrations, which have also been shown to promote tumor growth and the production of parathyroid hormone-related protein. Denosumab may indirectly affect skeletal tumor progression by targeting osteoclasts and disrupting this interaction between tumor cells and the bone microenvironment. RANKL inhibition has been shown to reduce bone osteolysis and skeletal tumor burden and to enhance antitumor efficacy of other therapies on skeletal tumors. This observation may point toward potential effects of denosumab beyond the skeleton. Preclinical evidence indicates that RANKL inhibition can reduce distant metastasis, and that this effect is potentially independent of osteoclast inhibition.

P37 - 1354
UNEXPECTED ANATOMICAL SITUS AFTER SURGERY FOR VESICOURETERAL REFLUX

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Problem statement: We present a 52-year-old woman with a history of surgery for vesicoureteral reflux (VUR) undergoing hysterectomy. **Methods:** At eight years, old, the patient received a Lich-Gregoir ureteroneocystostomy for VUR on the left side, creating an extravesical tunnel for the ureter. Two years later, having been diagnosed with bilateral VUR the patient underwent a double-sided Politano-Leadbetter ureteroneocystostomy, aiming for an anatomically correct reinsertion of the ureter. Although subsequently showing hydronephrosis and hydroureter on the right side, no further therapy was needed.
After five uncomplicated pregnancies, an isotope nephrography showed a limited function of the right kidney. Nephrectomy was evaluated but rejected in an asymptomatic patient. At the age of 52, during a laparoscopic hysterectomy a doubling of the broad ligament adjacent to the right side of the uterus was severed. It was then noted that the structure had held the kinked ureter. Reanastomosis wasn`t performed since poor kidney function was known. After confirmation of limited function of the right kidney a laparoscopic nephrectomy was performed. **Results:** Although confined to the intramural part, surgery for VUR may affect the more proximal part of the ureter. **Conclusion:** In order, not to complicate surgery, changes in anatomical conditions must be expected after surgery for VUR.
References:
Gregoir W., Congenital vesico-ureteral reflux, Acta Urol Belg., 1962 Apr;30:286-300
Politano VA., Leadbetter WF., An operative technique for the correction of vesicoureteral reflux, J Urol. 1958 Jun;79(6):932-41

P38-1415
OBSTRUCTION OF THE URETER BY ENDOMETRIOSIS: A CASE REPORT

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Problem statement: The prevalence of endometriosis (6-10%) is not a rare disease. However, the incidence seems to be higher due to the often-long delay until the diagnosis. An affection of the urogenital organs is rare (1-2%), but nevertheless as differential diagnosis important. **Methods**: A 34-year old woman presented herself with repetitive pain on the right flank to exclude a suspected congenital

ureteral stenosis. A previous magnetic resonance imaging showed a hydronephrosis on the right without detection of a cause of ureteral obstruction. The pain occurred only during menstruation. **Results**: The filiform ureteral stenosis diagnosed in the retrograd uretro-cystography was treated by the dilatation and placement of a double-j-catheter. The histological findings of the ureteral biopsy showed an unspecific inflammation without endometriosis. Because of persisting pain extended and cycled diagnostics with ultrasound and magnetic resonance imaging were carried out and showed a nodule of endometriotic implant of 3cm in the right broad ligament. The endometriotic implant spread around the right ureter and led to ureteral obstruction despite double-j-catheter. So, a hormonal treatment with a gestagen-only pill was introduced. In the following diagnostic laparasocopy the appendix vermiformis was also suspected of endometriotic implants and therefore removed. In the same surgery, the resection of the impaired distal ureter with intravesical re-implantation (Politano-Leadbetter-Procedure) was successfully performed. In the follow-up care (after 10 days) the micturating cystourethrogram and the voiding cystourethrogram (after three months) showed no vesicoureteral reflux and a normal bladder voiding. The hormonal treatment was carried on. **Conclusion**: If a young woman in reproductive age suffers from ureteral obstruction, it is pivotal to think of endometriosis as a differential diagnosis after excluding the most frequent causes such as kidney stones or tumours. The prognosis of extrinsic ureteral obstruction by endometriosis is much better than an intrinsic endometriosis of the ureter. Overall it is crucial to continue the hormonal treatment.

P39-1528
AN UNUSUAL CASE OF SUDDEN COMPLETE URINARY INCONTINENCE 20 DAYS AFTER PELVIC FLOOR SURGERY AND TENSION-FREE VAGINAL TAPE

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Problem statement: Tension-free midurethral synthetic slings are a minimal invasive treatment of stress urinary incontinence. If urinary incontinence occurs in combination with pelvic floor disorder, a combined treatment must be considered. We describe a case of sudden complete urinary incontinence 20 days after pelvic floor surgery and mid-urethral sling operation. **Methods and Results:** An 81-year-old woman presented herself with disturbing stress urinary incontinence and symptomatic pelvic organ prolapse in our outpatient clinic. In the past, her stress urinary incontinence was treated with an incontinence ring pessary until the pelvic organ prolapse increased and the pessary dislocated. 30 years before she had had an abdominal hysterectomy and presumably a colposuspension. During the examination, a further pelvic floor disorder comprising of vaginal vault prolapse, cystocele, enterocele, distal rectocele and anterior rectocele with stool-outlet-obstruction was diagnosed. In a urodynamic study, the stress urinary incontinence could be confirmed. To repair the symptomatic pelvic floor disorder the patient required an anterior and posterior colporrhaphy, vaginal repair of enterocele and anterior rectocele. Additionally, a tension-free midurethral sling (retropubic tension-free vaginal tape, TVT) was implanted because of stress urinary incontinence. Seven days after the operation the patient restarted taking acetylsalicylic acid (100mg) because of cardiac indication. After an uneventful first follow-up examination 14 days after the surgery with sonographic correct position of the TVT, the patient reported 20 days later with suddenly occurred complete urinary incontinence. The clinical and sonographic examinations showed a new haematoma of the vaginal vault and the anterior vaginal wall with consequent dislocation of the TVT. Four months later the haematoma had slightly become smaller and the urinary incontinence had improved. **Conclusion:** The occurrence of vaginal vault haematoma 20 days after pelvic floor repair is unusual even in combination with the intake of acetylsalicylic acid. The volume of the haematoma caused the dislocation of the TVT, which resulted in complete urinary incontinence. But when the haematoma absorbed, the incontinence improved. Once the TVT dislocated by haematoma, it might not be correctly placed anymore after its absorption. If there is still some incontinence after the entire absorption of the haematoma, the placement of a new TVT could be considered.

P40-1355
AGGRESSIVE ANGIOMYXOMA OF THE PERINEUM IN A 50-YEAR-OLD WOMAN

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Problem statement: Aggressive angiomyxoma (AA) is a rare soft tissue mesenchymal tumor, locally infiltrative with a tendency to repeated local recurrence. The first description was in 1983. It occurs normally in the vulvovaginal region, perineum and pelvis of females in reproductive age. But there are rare cases of AA in the inguinoscrotal region of males. Metastasis has been described. Local wide excision of the tumor is the primary management. The local recurrence rate is 25 to 47%. The expression of estrogen and progesterone receptors in AA suggests a hormone dependency of the tumor. Descriptions of medicament treatement exist with gonadotropin-releasing hormone agonists. **Methods and Results:** A 50-year-old woman reported first in 2013 with a painless swelling of 3x2cm at the perineum. She underwent surgical excision. Pathologic findings reported the tumor as an AA. The margins were not tumor free. The patient didn't appear to the follow-up examinations. In 2016, she reported again with a painless swelling of 2x2cm at the perineum and underwent a local wide resection. The tumor was deep in the perineal tissue and for a complete resection it was necessary to resect a part of the bulbospongiosus muscle and the soft tissue of the perineum above the rectum. Then the perineal body had to be reconstructed. The wound healing was without difficulties; resection margins were tight tumor free and the immunhistochemical examination showed a hormonal receptor positivity of estrogen and progesterone. **Conclusion:** AA is a rare disease, but when treating women with a painless swelling in the vulvovaginal region, perineum or pelvis AA should be considered as a differential diagnosis. There is no standardised surgical procedure described, but complete resection seems to be important. Even tumor free margins don't prevent a recurrence. In literature, a hormonal treatement with GnRH agonists is discussed to reduce the extent of surgical radicality and enhance the chance for tumor free margins or as a therapy for several recurrences.

P41-1375
PREGNANCY RATE OF FROZEN EMBRYO TRANSFER PATIENTS AND ITS RELATED FACTORS

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Problem: Frozen Embryo Transfer (FET) is an embryo transfer method on in vitro fertilization that has advantage compared to fresh embryo transfer (ET) because it does not need ovulatory stimulation. Several studies have been done to compare pregnancy rate outcome of FET and ET, but the results show different number and significancy. **Methods:** The research was retrospective cohort study and used 288 medical record datas in Obstetry and Gynecology Department of Cipto Mangunkusumo National Hospital, Indonesia. Pregnancy was measured by hcG level over 50 mIU/mL on day 15. All results were statistically analysed by SPSS 21.0, using chi-square test to know the relation of embryo transfer method and pregnancy rate. The other factors that affected pregnancy rate were also analyzed with multivariate logistic regression method. **Results:** The result showed FET pregnancy rate (39,6%) was higher than ET (38,2%) but not statistically significant (p=0,809). Factors that had significant correlation with pregnancy rate were ovary problem, decreased ovarian reserve, and male infertility problems. **Conclusion:** FET pregnancy rate is not statistically different compared to ET. Ovary problem, decreased ovarian reserve, and male infertility problems are related factors of the pregnancy rate.

P42-1323
AMNIOTIC FLUID AND CERVICAL MMP-8 AND IL-6 LEVELS IN PRETERM PREGNANCIES WITH PPROM OR INTACT MEMBRANES

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Problem statement: Preterm delivery is a major cause of perinatal morbidity and mortality, and associates with intra-amniotic inflammation (IAI). IAI is defined by elevated inflammatory biomarkers in amniotic fluid (AF), either with microbial invasion of the

amniotic cavity (MIAC) or as a sterile inflammation. Although the MIAC status of AF is of interest in a clinical setting, also IAI without MIAC associates with poor perinatal outcome. We evaluated collagen cleaving enzyme matrix metalloproteinase-8 (MMP-8) and pro-inflammatory cytokine interleukin 6 (IL-6) concentrations in cervical and AF samples. Amniocentesis being an invasive procedure, we wanted to assess if elevated pro-inflammatory marker levels could be detected also from cervical fluid samples. **Methods:** This prospective study was performed at the Department of Obstetrics and Gynecology, University Hospital, Helsinki, Finland, between June 2013 and November 2016. A total of 64 women with singleton non-diabetic pregnancies between 22+0 and 37+0 weeks of gestation with AF and cervical samples were enrolled. Both patients with PPROM and with intact membranes (IM) before sampling were included. MIAC was defined as a positive AF culture or bacterial 16S rRNA gene sequencing. MMP-8 was quantified with a solid-phase immunoenzymometric assay and IL-6 with commercial ELISA. Statistical analyses were performed using SPSS v.24. **Results:** Overall 24 (38%) women had PPROM. Amniocentesis was performed to 52 (81%) women due to suspected IAI and 21 (40%) of them had MIAC. Median concentrations of AF-MMP-8 and AF-IL-6 were higher in patients with PPROM than in those with IM [544 µg/l (range 8.2-16166) and 9.15 µg/l (range 2.1-9753), p0.001] and [14.75 ng/ml (range 0.5-367) and 0.9 ng/ml (range 0.1-576), p=0.005], respectively. Median cervical MMP-8 and IL-6 concentrations did not differ between those with PPROM and IM. In IM cases, cervical MMP-8 levels correlated with AF-MMP-8 (rs=0.480, p=0.002) but cervical IL-6 did not with AF-IL-6 (rs=0.270, p=0.092). In PPROM cases, no correlations occurred. In PPROM cases, the median concentrations of AF-MMP-8, AF-IL-6, cervical MMP-8 or cervical IL-6 did not differ between patients with or without MIAC. In contrary, in case of IM patients with MIAC (n=11), median concentrations of AF-MMP-8, AF-IL-6 and cervical MMP-8 were higher than in those without MIAC (n=29) [1483 µg/l (range 144-9754) and 7.2 µg/l (range 2.1-1260), p0.001], [269 ng/ml (range 5.6-576) and 0.6 ng/ml (range 0.1-12), p0.001] and [1845 µg/l (range 860-6344) and 440 µg/l (range 7.8-7598), p0.001]. However, this did not apply to cervical IL-6. **Conclusion:** Cervical MMP-8 correlated with AF-MMP-8 in IM patients. IM patients with MIAC had higher concentrations of cervical MMP-8, AF-MMP-8 and AF-IL-6, although no clear correlation between the measured cervical and AF markers were found. However, no correlations were detected for women with previous PPROM. Per our results, cervical MMP-8 and IL-6 cannot predict reliably the intra-amniotic concentrations of these markers. However, in patients with intact membranes, cervical MMP-8 concentration could reflect the magnitude of amniotic MMP-8, thus selecting patients who could benefit from amniocentesis for additional information.

P43-1293
ROBSON CLASSIFICATION OF CAESAREAN SECTION CASES IN ARMADALE HEALTH SERVICE, WESTERN AUSTRALIA IN ONE-YEAR PERIOD

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Aim: The aim of this audit is to conduct analysis of Caesarean Section (CS) cases using Robson Classification. By identifying the groups of women with highest CS rate, effective measures can be proposed and implemented to reduce it. **Materials and method:** All deliveries in obstetrician department of Armadale health service, Western Australia, from July 2015 to June 2016 have been included. Robson classification had been applied to all caesarean section deliveries using departmental records. Robson Ten- Group Classification is a system that classifies women into 10 groups based on their obstetrics characteristics (parity, previous CS, gestational age, onset of labour, foetal presentation and the number of foetuses). **Results:** From total 2493 deliveries, 523 was done with Caesarean section method (the annual caesarean section rate was 20.97%). About forty percent (213 cases) were patients with single cephalic pregnancy and history of caesarean section (group 5). Induced nulliparae single cephalic was the second largest group with 77 cases (14.72%) and nulliparae patients with single cephalic who went through spontaneous labour but ended up with CS were in the third place (13.57%) **Conclusion:** By using Robson classification, we divided caesarean section cases into ten groups. Overall CS rate in Armadale health service is approximately ten percent below national rate (32%). Our results showed that patients with previous caesarean section was the largest group therefore it is important to closely monitor and avoid unnecessary CS in low risk patients specially in nulliparous mothers as it can increase their chance to have CS in further pregnancies. In addition, vaginal birth after caesarean (VBAC) should be encouraged in all multipara patients.

P44-1356
COMPARISON BETWEEN ORAL ESTROGEN ONLY AND COMBINATION WITH ESTROGEN DEPOT INJECTION USAGE FOR FROZEN-THAWED EMBRYO TRANSFER

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Problem statement: The aim of this study was to compare two methods of endometrial preparation for frozen-thawed embryo transfer (FET), oral estradiol valerate tablets only and combination with estradiol valerate depot injection. **Methods:** This retrospective study included a total of 213 FET cycles that used estrogen-progesterone supplement as for artificial endometrial preparation method, between Nov 2015 and Jul 2017 at Maria Fertility Hospital. Oral estradiol valerate tablets (OEV) only group (EV-O) included 104 cycles that received continuous OEV from day 3 onwards up to the day of progesterone supplement, while combination estradiol valerate depot (EVD) injection group (EV-D) included 109 cycles who had EVD treatment added to OEV from day 3 onwards up to the day of progesterone supplement. **Results:** No statistical difference was found in the baseline characteristics between two groups. No significant difference was observed between them in the number of ultrasonography follow-up (F/U) days, total OEV dose, endometrial thickness (EMT) on the day of progesterone administration, biochemical and clinical pregnancy rates. However, there was a significant difference in EMT on ET day (EV-O vs. EV-D; 9.6mm vs. 10.32mm, *P=0.002*). In cases of inadequate EMT (8mm) on the first F/U day, daily OEV dose (2.8mg/day vs. 1.12mg/day, *P=0.001*) and the total OEV dose until the day of progesterone administration (157.36 mg vs. 139.0 mg, *P=0.01*) were significantly higher in EV-O group. **Conclusion:** In the case of inadequate EMT patient, combination with estrogen depot injection for FET cycles is more effective in achieving adequate endometrial preparation by reducing daily OEV dose and increasing endometrial thickness on embryo transfer day compared to that of oral estrogen only usage. Large prospective study is needed to confirm the effectiveness of estrogen depot injection on frozen-thawed embryo transfer cycles.

P45-1193
A CASE OF IDIOPATHIC ACUTE HEPATITIS WITH COMPLICATIONS IN MID-TRIMESTER PREGNANCY

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Problem statement: Liver diseases in pregnancy although rare but they can seriously affect mother and fetus. It is difficult to identify features of liver disease in pregnant women because of physiological changes. Physiologic changes of pregnancy can be confounding with the symptoms of liver diseases. It can not only complicate mother's life but also burden of life of fetus. **Methods:** We present a case of idiopathic acute hepatitis with complications in mid-trimester pregnancy **Results:** A 32- year- old multiparous pregnant woman (gravida 2, para 1) at 16 weeks gestation presented with high fever, upper abdominal pain and tachycardia. In pelvic examination, poor odor of vaginal discharge was noted and the cervix was 1 centimeter dilated and 50 percent effaced. Laboratory results showed impaired liver function tests, high levels of C-reactive protein positive DIC profiles. Cultures for Ureaplasma urealyticum and Mycoplasma hominis in vaginal discharge were positive. Under diagnosis of clinical chorioamnionitis with secondary progression of DIC, she underwent termination of pregnancy and after that, computed tomography was performed. The results of it showed hepatopathy with a secondary change of gallbladder, splenomegaly and pleural effusion in both lungs (Figure 1.). The laboratory tests for acute viral hepatitis, autoimmune hepatitis and hepatitis caused by Wilson disease were normal. She received transfusions of fresh frozen plasma (FFP) and platelet concentrate to correct for coagulopathy and thrombocytopenia and was treated with symptomatic management for acute hepatitis and chorioamnionitis. She was discharge in good condition without specific complications **Conclusion:** Acute viral hepatitis is the most common disorder in pregnancy. Although there are pregnancy-related liver disorders such as acute fatty liver of pregnancy, HELLP (Hemolysis, elevated liver enzymes, low platelets) syndrome, intrahepatic cholestasis of pregnancy, they occur after 20 weeks' gestation. In this case, she was at 16 weeks' gestation so the probability of pregnancy-related

liver disorders was low. And she had chorioamnionitis with DIC so sepsis was suspected. In consideration of her general condition, we decided termination of pregnancy and after that, she was managed about acute hepatitis. We report an uncommon case of acute hepatitis of unknown causes with DIC and clinical chorioamnionitis coincidentally in mid-trimester pregnancy. **Figure captions:** The images of computed tomography. (A) Hepatopathy with (B) secondary change in gallbladder and (C) splenomegaly

P46-1197
A CASE OF OVARIAN TORSION OF MIXED EPITHELIAL TUMOR MISDIAGNOSED AS A MALIGNANCY IN POSTMENOPAUSAL WOMAN

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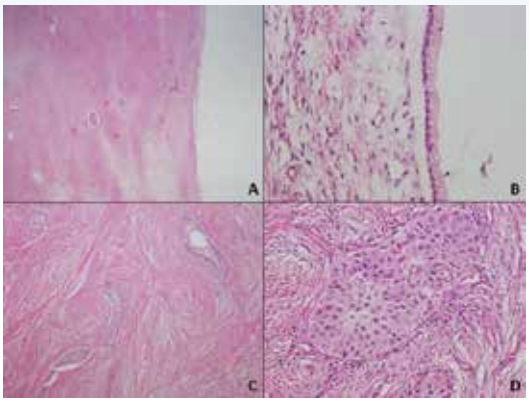
Problem statement: Adnexal torsion is often diagnosed in reproductive age but rare in postmenopausal women at approximately 2.7%. So, most cases of adnexal torsion with postmenopausal women are diagnose as a malignancy preoperatively. The recent case is presented that ovarian torsion with mixed epithelial tumor misdiagnosed as a malignancy in postmenopausal woman. **Methods:** We present a case of ovarian torsion of mixed epithelial tumor misdiagnosed as a malignancy in postmenopausal woman. **Results:** A patient aged 65 years presented with lower abdominal pain which started 3 days ago. Ultrasound showed a multiseptated cystic mass with a solid portion in the left ovary. So, malignancy was suspected but serum CA-125 revealed normal levels. The patient underwent exploratory laparotomy. A white-gray cystic tumor was detected in the left adnexa, having a torsion of 720 in a counterclockwise direction. First, the left salpingo-oophorectomy was performed and the result of a frozen section biopsy confirmed a borderline Brenner tumor associated with a mucinous tumor. Subsequently, total hysterectomy and right salpingo-oophorectomy were performed. The specimen revealed that the cyst wall was lined by a single layer of benign mucinous cells, which was consistent with mucinous cystadenoma. The solid area displayed around to oval tumor cell nests within fibrous stroma, obvious nucleoli and longitudinal grooving with no cytologic atypia, of which features were benign Brenner tumor (Figure). **Conclusion:** Adnexal torsion in postmenopausal women is difficult to diagnose preoperatively because the clinical symptom of it is constant and dull in postmenopausal women. Furthermore, the risk of malignancy increases with age in epithelial ovarian tumors. The patient of this case shows s a large, multicystic ovarian mass containing a solid portion in radiologic assessment. Because mucinous tumors are usually large, manifest as multicystic lesions and Brenner tumors appear as a solid mass, discrimination between benign and malignancy is difficult with sonographic findings alone. Due to these reasons, surgery is performed based on condition severity in preparation for malignant tumor treatment instead of torsion. But it should be taken into consideration that the possibility of malignancy is low in postmenopausal women with normal CA125 levels and although very rare, ovarian torsion can occur in postmenopausal women, this consideration makes us carry out appropriate surgery based on the result of frozen section biopsy to exclude the possibility of malignancy. It is important that although malignant ovarian tumor is suspected preoperatively in postmenopausal women, surgeons can avoid unnecessary surgical procedures by considering the possibility of benign when there is intraoperative finding of ovarian torsion. **Figure. (A)** The tumor consisted of solid (left side) and cystic (right side) areas. (H&E, x40) (B) Cystic spaces were covered with single layered mucinous cells. (H&E, x400) (C) Solid areas showed dense fibrous stroma and round to oval shaped epithelial cell nests. (H&E, x100) (D) Tumor cell nests in solid areas showed no abundant eosinophilic cytoplasms with a single prominent nucleoli and frequent nuclear groove. (H&E, x400)



P47-1418
INTRAVENOUS APPLICATION OF HELIXOR® IN GYNECOLOGICAL ONCOLOGY GROUP IN KOREA: IS IT SAFE?

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Traditional mistletoe (*Viscum album L.*) therapy has been frequently used in patients with cancer in Europe. The different mistletoe formulations available for oncological use are Iscador®, Iscucin®, AbnovaViscum®, and Lektinol®, as well as Helixor®, which may improve therapeutic outcomes following intravenous (i.v.) administration and therefore, is becoming more commonly used. We conducted an observational study in four different University Hospital Centers and the frequency of adverse drug reactions (ADRs) induced by the i.v. infusion of Helixor® was determined. Of the 108 patients with gynecological cancer who received i.v. infusions of Helixor®, 10 (9.3%) reported mild ADRs, and no serious ADRs were reported. Therefore, i.v. infusion of Helixor® was determined to be safe, and prospective efficacy studies are recommended.

P48-1104
PREDICTION OF TERM DELIVERY AFTER CERVICAL CERCLAGE ACCORDING TO CERVIX LENGTH IN WOMEN AT HIGH RISK OF PRETERM BIRTH

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Problem statement: To predict cervical length for term delivery after cerclage in women at high risk of preterm birth. **Methods:** Ninety-seven women at high risk of preterm birth who underwent McDonald cerclage and were delivered by a single surgeon between January 2003 and June 2012 were included. They were grouped based on cervical length (CL) by ultrasonography, where 2.5 cm is usually defined as short cervical length. We compared clinical characteristics per the diagnosed short cervical length (≤2.5cm vs. 2.5cm) and predicted the optimal cervical length for term delivery after cerclage. **Results:** Postoperative CL differed (2.8cm vs. 3.3cm, *p=0.003*) by the pre-surgical grouping based on cervical length (n=40, n=57), while gestational age at delivery did not differ significantly. If the postoperative CL was secured at 3.1cm, two thirds of patients (sensitivity 64%, specificity 65%) maintained pregnancy till 37 weeks. After adjusting for confounding factors, we showed that postoperative CL longer than 3.1cm resulted in an average gestation of 37 weeks or later (OR=2.6, 95% CI 1.2-6.0). **Conclusion:** Postoperative CL over 3.1 cm predicts term delivery after 37 weeks.

Table 1. Clinical characteristics

Characteristics	N=97
Age(years)	32.5±4.6
Previous spontaneous preterm delivery	57(58.8%)
Gestational age at cerclage(weeks)	15.4±3.1
Gestational age at delivery(weeks)	34.6±6.1
Term delivery (≥37weeks)	55(56.7%)
Cervical length before cerclage(cm)	2.7±0.9
Cervical length after cerclage (cm)	3.1±0.9
Interval(weeks)	19.5±7.3

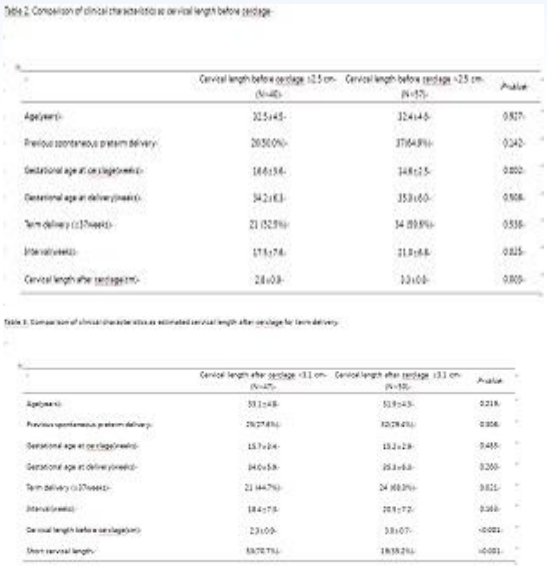
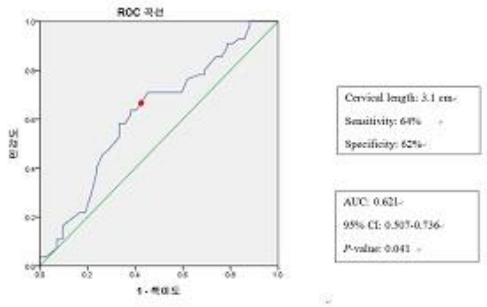


Table 4. Influencing factors to term delivery

	OR (95% CI)	P-value
Age	1.066(0.971-1.172)	0.252
Previous spontaneous preterm delivery	0.702(0.293-1.679)	0.668
Short cervical length	1.625(0.355-7.435)	0.976
Cervical length before cerclage ≥2.3 cm	2.189(0.439-10.928)	0.182
Cervical length after cerclage ≥3.1 cm	2.631(1.151-6.015)	0.022

Figure 3. Prediction of cervical length after cerclage to maintain pregnancy until 37 weeks



P49-1436
PREVALENCE OF ABNORMAL UTERINE BLEEDING FOLLOWING CESAREAN SECTION BY DOUBLE-LAYER INTERRUPTED CLOSURE OF HYSTEROTOMY

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Problem Statement: Recent studies have indicated that surgical techniques used for closure of hysterotomy incision may affect uterine scar healing and have long-term consequences, specifically in terms of abnormal uterine bleeding. Although there have been several reports of an association between abnormal bleeding and a niche at the uterine scar site, prospective studies on this problem in a random population are scarce. Voet et al. reported that niche prevalence was 64.5%, with 22% categorized as large (defineded as a residual myometrium thickness of 50% of that of the adjacent myometrium). Additionally, postmenstrual spotting, defined as more than 2 days of brownish discharge after the end of the menstrual period, is more prevalent in patients with large niches than in patients with smaller niches. In the aforementioned study, uterine closure was mostly performed using the single-layer technique. € We previously reported that the incidence of large niche formation was significantly lower with double-layer closure than with single-layer closure, although double-layer closure did not decrease the overall incidence of niche formation. Therefore, we expect the prevalence of postmenstrual spotting to be lower in double-layer closures than in single-layer closures. We aimed to study the relationship between niche and postmenstrual spotting, and its prevalence, after cesarean section (CS) of a double-layer closure of hysterotomy. **Methods:** A prospective cohort study of women undergoing CS with a transverse lower uterine segment incision was performed. The site of the cesarean scar was evaluated 6 months after CS with saline contrast sonohysterography. The niche depth and residual myometrium was measured and the ratio of the niche depth to the sum of the niche depth and residual myometrium thickness (niche ratio) was calculated. Bleeding pattern was assessed 12 months after CS. **Results:** Fifty-four women were included. Niches were identified in 28/54 (51.9%) women. A large niche (niche ratio 0.5) was observed in only one case (1.9%). The prevalence of postmenstrual spotting at 12 months after CS was 4/54 (7.4%). **Conclusion:** In our study, the prevalence of large niche and postmenstrual spotting after CS with double-layer closure was lower than that with single-layer closure previously reported. Double-layer closure may be associated with a lesser frequency of large uterine niches and postmenstrual spotting after CS.

P50-1315
COMPARATIVE EFFECTIVENESS OF CORRECTION OF CERVICAL INCOMPETENCE THROUGH CERCLAGE AND OBSTETRIC PESSARY

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Problem statement: Preterm birth is a global problem of obstetrics and perinatology. Complications resulting from premature births are the main cause of death of children under five years of age (Information Note of the WHO, 2016). The consequences of cervical incompetence (CI) are up to 40% of prematurely completed gestations. **Objective** of the study: improvement of the outcome of pregnancy and childbirth in the patients with CI. **Methods:** the study was performed in 2012-2015 in the clinical bases of PFUR. Pregnant women with CI were examined and treated at 18-22 week (n=221). The CI criterion was a vaginal ultrasound data: cervix lengh (CL) ≤ 25 mm. The patients were randomized to groups: I – cerclage correction (circular MERSILENE tape) (n=107); II – pessary correction ("Juno" manufactured by Simurg, Belarus) (n=114). The main parameters of the subjects of both groups were comparable. The effectiveness of the correction was determined in 2-3 weeks after putting of the pessary or suturing of the cervix uteri per the ultrasound data, the effectiveness criterion was the length of the CL 25 mm, and the width of the cervical canal10 mm. To determine the validity of the differences, we used the Student`s test under normal distribution, and the Mann-Whitney test (U-Test) as the nonparametric method. The methods of variance statistics (correlative, multi-factor, variance analysis, logistic regression analysis) and the probability relationship calculation were used. The differences were statistically credible at p0.05. **Results**: The analysis of the gestation course showed that the main complication of the gestation after the correction was an imminent abortion (O0.20). This complication was determined in 194 (87.8%) patients, in the cerclage group - 94.3%, in the pessary group – 81.5% (p0.05). In I group one pregnant woman had 2.2±0.6 hospital admissions, while in II – 1.3±0.8, i.e. after correction with the pessary, the women were hospitalized 1.7 times less frequently (p0.05). In general, the effectiveness of the CIC correction was 90.5%, in I – 91.6%, in II – 89.5%. We determined the dependence of efficacy of the methods on pH of the vaginal medium, CL and history of preterm birth. If pH of the vagina was 4.0-5.3, the efficiency of the pessaries was 92.1%, cerclage - 94.8%, if pH5.3, the efficiency of the cerclage was reduced to 72.3%, but it remained high enough in the pessary group (85.2%). At CL15 mm, the cerclage proved to be more efficient (86.4%, 73.8% respectively) (p0.05). In the patients with preterm births in past medical history, the correction of the CI was ineffective in I group - 3.4 times more frequently, in II – 3.0 (p0.05). In the analysis of the births, it was found that 85.0% of the patients with CI, who had been cerclaged, and 77.1% of the patinets with CI who had been put the pessary, delivered in due time. The premature births were in 13.1% and 16.7% respectively. Spontaneous miscarriages occurred more frequently in the II group (5.3% vs. 1.9%). **Conclusions**: The choice of the CI correction method on an individual basis depending on the cervical lengh, the pH of the

vagina, the presence of premature births in a past medical history will allow prolonging the pregnancy with CI, reducing the number of premature births.

P51-1389
EPIGENETICS AND FIBROIDS

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Despite the large number of works devoted to the study of the pathogenesis of uterine fibroids, so far most of the mechanisms underlying the initiation and progress of the disease remain unknown.The purpose of this study was to investigate the pathogenetic importance of DNA- methylation in the development and prognosis of fibroids, as well as in the study of peculiarities of DNA- methylation gene of estrogen receptor ESR1α, gene of progesterone receptor PgR-B and gene of WNT-inhibitory factor 1 (WIF1) for fibroids comparing with the normal tissue of the myometrium. In a prospective study, the samples were obtained during the conservative myomectomy or hysterectomy in 30 patients aged 35 to 52 years (mean age 43 years). The control group included samples of biopsies of normal myometrium taken from the same patients. Dimensions leiomyomata ranged from 2 cm to 16 cm (mean 6.7 cm).All persons involved in the study gave written informed consent to participate in it. Isolation of DNA: The received tissue samples were grounded into pieces to 2 g, which are then lysed in order to isolate and transfer the DNA unmethylated cytosine residues to thymine while maintaining unchanged methylated cytosine residues (bisulfite conversion).Then PCR have been performed.Sequencing was carried out in the center of collective use "Gene" at the on Institute of Molecular Biology of V.A. Engelhardt RAS based on standard protocol using forward primers and kit reagents ABI PRISM® BigDye ™ Terminator v. 3.1. In the analysis of DNA methylation biopsies myoma node in 3 patients out of 30 showed methylation of the estrogen receptor gene ESR1α, at 27 - the absence of methylation of the estrogen receptor gene ESR1α (10% vs 90%, p = 0.0273). In the control group (biopsies of healthy myometrium) in 100% of patients showed no methylation ESR1α receptor gene, p = 0.0038). Also, the analysis of DNA methylation biopsies myoma nodes in 2 patients of the 30-identified gene methylation PgR-B progesterone receptor, in 28 - the absence of methylation of the gene progesterone receptor PgR-B (6,67% vs 93,33%, p = 0.03253). In the control group (biopsies of healthy myometrium) in 100% of patients showed no methylation PgR-B receptor gene, p = 0.038). In the 22 biopsies myoma node identified gene methylation WIF1 factor in 8 biopsy specimens - the lack of methylation WIF1 factor gene (73.33% vs 26.67%, p = 0.032). In the control group (healthy myometrium) in all patients showed no methylation WIF1 factor gene (100%, p = 0.0034). Methylation at least of one site in the promoter region of the estrogen receptor gene ESR1α was detected only in three myoma node biopsies. The overall level of methylation was 2.166%. The findings suggest that low levels of methylation of the promoter region of the estrogen receptor gene ESR1α uterine fibroids, which may be a consequence of hypomethylation of the promoter of this gene and its normal state. Methylation of at least one site in the promoter region of the progesterone receptor PR-B gene was detected in only two biopsies. The overall level of methylation was 2.5%. The findings suggest that low levels of methylation of promoter PR-B progesterone receptor gene region with uterine fibroids, which may be a consequence of hypomethylation of the promoter of this gene and its normal state. The methylation of at least one site in the promoter region WIF1 factor gene was found in 22 patients with uterine myoma. There are clear differences of methylation status of the gene in normal tissue where the gene is not methylated and, therefore, functionally active in tumor tissue where WIF1 methylated gene and, consequently, its expression is suppressed.According to the results of our study, the vast majority of tissue samples myoma node noted from 5 to 11 sites of methylation of the promoter region of the gene WIF1.WIF1 methylated gene epigenetically silent, ie, It is not expressed, and therefore not capable of encoding functionally active protein WIF1 - inhibitor WNT-canonical signaling cascade. Because of WNT-signaling pathway becomes active and thus forming a mechanism triggered myoma tumors. We believe that the findings can be considered yet another step towards understanding the formation of abnormal cellular and subcellular mechanisms of the pathogenesis of uterine fibroids.

P52-1070
USE OF SURGICAL DRAINS IN GYNAECOLOGY SURGERY REVISITED

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We present two cases of unanticipated post-operative haemorrhage in which routine use of surgical drains have saved the day. **Case Scenario 1**: A 43-year-old healthy patient underwent uncomplicated total abdominal hysterectomy for large uterine fibroids. A Jackson-Pratt surgical drain was inserted. The next day, there was a sudden increase in drain output consisting of frank blood. Her haemoglobin dropped to 6g/dL. During re-laparotomy, a small ooze was detected near the infundibulo-pelvic ligament, and this was arrested by diathermy. **Case Scenario 2:** A 52-year-old patient underwent myomectomy for a large solitary fibroid. Within eight hours after wound closure, the patient had lost 500 millilitres of blood and detected through a Jackson-Pratt drain. At re-laparotomy, we sutured and stopped a small arterial bleeding vessel at the bladder base. **Discussion and Conclusion**: It is said, “Nobody has regretted putting in a drain but many have regretted not putting one in after surgery”. The art of surgery aims for minimal blood loss during operation and zero loss after that. This involves a degree of faith in both surgical skills and patients’ haemostatic mechanisms. By the time haemodynamic deterioration occurs, significant morbidity might have set in. A surgical drain poses hardly any increase in surgical time or infection that delays patients’ discharge. We conclude that routine use of surgical drain can reduce morbidity from unanticipated post-operative haemorrhage.

P53-1218
SUBMUCOSAL UTERINE MYOMA REGRESSION AFTER HIFU TREATMENT

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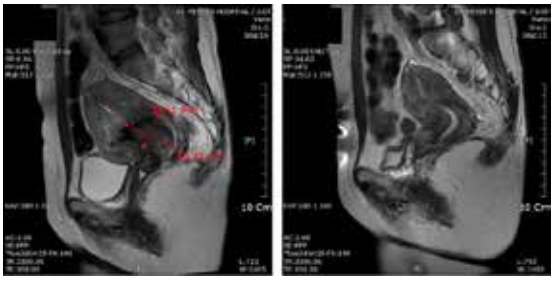
Purpose: Submucosal uterine myoma can cause menorrhagia, dysmenorrhea and life-threatening severe anemia. Recently, HIFU is regarded as a safe and effective treatment option for uternine myoma and adenomyosis. The objective of this article is to review about a patient with submucosal uterine myoma regression after HIFU treatment at St. Peter`s Hospital, Seoul, Republic of Korea. **Methods:** A 48-year-old woman who has two maternity experiences came with chief compaint of excessive menstrual bleeding with clots and prolonged monthly periods. The patient`s medical history revealed menorrhagia and severe anemia (Hemoglobin 6 g/dl) with blood transfusion. On examination, the abdomen was soft and non-tender. Investigation included: RBC Count 3.40 x 103 $\mu\ell$, Hematocrit 32.2 % and Hemoglobin 10.9 g/dl. MRI showed a submucosal myoma (5 cm * 3 Cm * 3 Cm, FIGO type 1). Under IV anesthesia, the patient was given PRO HIFU (US-guided HIFU, Shenzen, China) treatment. Acoustic power of 300 W/cm2 were delivered with 0.1 second interval at the target point. This process was repeated on a point by point basis. After one slice was treated, the target was shifted 2 mm laterally. **Results:** Immediately after HIFU treatment, MRI was done. MRI revealed submucosal myoma was compleately ablated. Next day the patient was discharged with any other problem. After 3 months from HIFU treatment, the patient visited our hospital. Except of vaginal discharge, patient felt good with no more menorrhagia. On MRI examination, there was no submucosal myoma with normal appearance of uterus. Investigation included: RBC Count 4.27x 103 $\mu\ell$, Hematocrit 37.7 % and Hemoglobin 12.7 g/dl. Additionally, from January 2016 to August 2017, 784 patients among which 332 suffered from uterine fibroid and 452 suffered from adenomyosis, were treated as inpatients by PRO HIFU (US-guided HIFU) treatment at our hospital.



Conclusion: Ultrasound-guided HIFU treatment can be a safe, effective and non-invasive alternative in treatment of submucosal myoma.

P54-1220
PERINATAL EXPOSURE TO DIETHYLHEXYL PHTHALATE INDUCED POLYCYSTIC OVARIAN SYNDROME-LIKE CHANGES IN F1 OFFSPRING MICE

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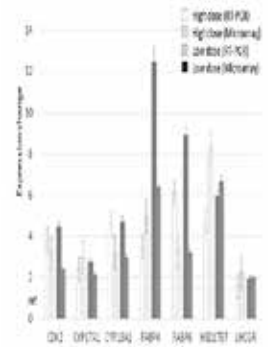
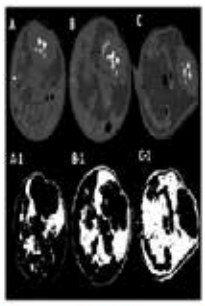
Purpose: Polycystic ovarian syndrome (PCOS) is the most common endocrinopathy in infertile women, and affects approximately 5–15% of reproductive age women. We demonstrated that exposure of mice to DEHP via the parenteral route resulted in altered gene expression in siblings and induced pathophysiologic changes like those observed in PCOS women. **Methods:** Adult female CD-1 [Crl:CD-1 (ICR) BR] mice were obtained and bred with male mice of the same strain at the breeding facility. Three pregnant mice were injected subcutaneously with corn oil (control group, n = 1) or DEHP (Sigma-Aldrich, Inc., St. Louis, MO) dissolved in corn oil during pregnancy (gestation days 9–16) and lactation (postpartum days 7–21). Both ovaries were removed from F1 female mice per group (control group, n = 5; low dose group, n = 6; high dose group, n = 8), and RNA was extracted from three ovaries of different mice in each group. Total RNA was extracted from three ovaries of different mice in each group using TRIzol Reagent® (OH, USA) per the manufacturer's instructions. Real-time quantitative PCR was performed in triplicates in 384-384-good plates. **Results:** The microarray analysis indicated that 529 genes were significantly dysregulated after low-dose perinatal exposure, while 617 genes showed significant changes after high-dose perinatal exposure to DEHP. Ninety-five genes were commonly upregulated, and an additional 95 genes were downregulated in both treatment groups. The RT-PCR data corroborated the results of the microarray analysis. The mean body weight of the control group (34.7 ± 1.47 g, n = 5) was significantly lower (paired t-test, P 0.05) than those of the low-dose (41.92 ± 4.73 g, n = 6) and high-dose treatment groups (42.8 ± 2.26 g, n = 8). The amount of visceral fat was significantly lower in the control group (1046.0 ± 318.8 mm3) than in the treatment groups (low-dose group, 2442.5 ± 583.3 mm3; high-dose group, 2496.05 ± 987.5 mm3). The percentage of ovarian area exhibiting hyperthecosis area was higher in the low-dose treatment group (66.65%, calculated using the equation, hyperthecosis area/total area × 100) than in the other groups (40.81% in the control group, 50.47% in the high-dose treatment group).

Figure 1. Results of the quantitative polymerase chain reaction (qPCR) analysis



Comparison of microarray analysis and quantitative real-time PCR data for gene expression altered by perinatal DEHP.

Figure 2. Results of the micro-CT analysis in F1 mice subjected to perinatal DEHP exposure.



The images in upper panel are computed-tomography images while those in the lower panel are selected images of visceral fat. The white areas in the lower-panel images represent fat tissue, and the black areas represent other tissues of the viscera. A and A-1 indicate control mice, B and B-1 indicate low-dose treatment mice, and C and C-1 indicate high-dose treatment mice. Mice from the low-dose and high-dose treatment groups exhibited significantly more visceral fat than the control mice.

Conclusion: Our results suggest DEHP, and not only its metabolite, is toxic enough to affect follicular development. Altogether, these results suggest that perinatal exposure to endocrine-disrupting chemicals might be a candidate factor for the emergence of PCOS in adulthood.

P55-1179
HOW DO YOU DISTINGUISH THE MALIGNANT CHANGE OF MATURE CYSTIC TERATOMA AND IMMATURE TERATOMA OF OVARY?

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Problem statement: Immature teratoma and malignant change of mature cystic teratoma (MCT) are uncommon ovarian germ cell tumor. They differ from MCT both histologically by the presence of immature tissue and clinically by their more malignant behavior. We present one case of malignant change of MCT. Methods: A 55 years old woman visited our clinic due to weight loss and abdominal distension for 2 months. She has 13cm diametered round cystic tumor with focal calcification. CT finding was MCT. (Fig.1) She had SCCAg 3.8, CA125 111ng/dl, CEA 32.4. On the exploratory laparotomy, huge ovarian tumor adheres to sigmoid colon and bladders with deep invasion. TAH BSO, Colonic segmentectomy, Bladder excision with primary repair. Omentectomy was done. Results: The pathologic report was Squamous cell carcinoma arisisng frommature cystic teratoma. The tumor contains hair ball and yellowish fluid, Cancer cell invased muscularius proprer layer of colon and bladder wall, there was no embryonal tissue or neuroepithelium. So, we are on going chemotherapy with pacritaxel and carboplatin in stead of BEP or VBP regimens. Conclusion: Malignat change of benigm cystic teratoma has been recording 0.5 to 2% cases in patint older than 40 years old. The most common malignancy is squamous cell carcinoma. Germ cell tumor found in young adolescence, MCT tend to smaller with more cystic change without metastasis but immature teratoma are large encapsulated mass with solid component. They metastse to the peritoneum, liver and lung. Immature teratoma chemotherapy induce cellular maturation, so histologic diagnosis is important to choose the regimens.

P56-1337
THE RELATIONSHIP BETWEEN THYROID AUTOANTIBODY AND FERTILIZATION OUTCOME IN FIRST TIME IN VITRO FERTILIZATION CYCLE

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Problem statement: The presence of thyroid autoantibodies (TAA) is related to fertility problems and there have been researches that showed the impact of TAA on in vitro fertilization and embryo transfer (IVF-ET) outcomes. However, most of their results were limited in the outcomes after embryo implantation. The aim of this study was to investigate the impact of TAA on fertilization rate and embryo qualities before embryo implantation. **Methods:** Retrospectively, we analyzed the women who underwent their first-time IVF-ET cycles from January 2015 to December 2016. The patients who had the infertility cause of male factor and abnormal findings of semen analysis on the fertilization day were excluded. A total 487 patients

were included and 34 patients had positive results of TAA, whereas 453 patients had negative results of TAA. **Results:** Mean age, AMH, TSH, fT4 levels and the duration of infertility of both groups were similar. There were no significant differences between the groups in terms of total number of retrieved oocytes, the number of metaphase II and metaphase I oocytes, the ratio of intracytoplasmic sperm injection (ICSI). Statistically, differences of total fertilization rate (68.9% vs. 69.8%, p=0.760), fertilization rate with ICSI (84.2% vs. 79.2%, p=0.244), fertilization rate of conventional IVF (62.1% vs. 65.8%, p=0.278) and the ratio of good quality embryos (13.6% vs. 14.4%, p=0.760) were not found. **Conclusions:** There was no significant difference in the outcomes of fertilization following IVF-ET in the patients with TAA when compared with those negative for TAA. Thyroid autoantibody status did not affect fertilization outcomes in women with their first-time in Vitro Fertilization in this study.

P57-1077
CLINICAL FEATURES OF ENDOMETRIOSIS IN ABDOMINAL WALL

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Introduction: Endometriosis is defined as the presence of functioning endometrial tissue outside the uterine cavity. Scar endometriosis is an uncommon but well-described condition. It is caused by the dissemination of endometrial tissue into the wound at the time of surgery. Scar endometriosis can occur after prior abdominopelvic surgeries and interventions such as hysterotomy, salpingostomy, episiotomy, caesarean section (C-section), appendectomy, amniocentesis and laparoscopy. The deposits can involve uterine scar, abdominal musculature or subcutaneous tissue with the latter being the most common site of extragenital endometriosis. Estimated incidence after caesarean delivery is 0.03-0.4% and may reach up to 1.08% after hysterotomy. The endometrial implant may be cystic, solid or mixed. It usually presents as a palpable mass at the scar site with or without cyclical pain. **Objective & method:** We have collected and documented a case series of 12 patients who underwent surgical management for CSE in our obstetrics and gynecology clinic at Jeju National University Hospital between January 2006 and December 2015. All patients were informed about surgical management and written informed consents were obtained. All patients had a history of previous cesarean section, and their initial cesarean sections were performed in different hospitals. After the clinical assessment, the diagnosis was confirmed by pelvic ultrasonography **Results:** This study includes the medical records of 12 patients who underwent surgical treatment for CSE. Pfannenstiel incision had been performed for cesarean section in all patients. The median age was 30.6 years (range from 24 to 39 years), and the mean BMI was 28. The common complaint of the patients was a palpable subcutaneous mass under the incision scar. Seven patients suffered from cyclical pain. Noncyclic pain was seen in three patients, and four patients had experienced the enlargement of the nodule during the menstrual period. The mean time interval between initial cesarean section and the onset of symptoms was 45 months (range of 16 to 108 months). The preoperative diagnosis was corrected in all patients. Two patients had medical treatment before admission to our clinic. Those two patients had a history of medical treatment failure. All the patients were treated surgically. Almost all the nodules were excised easily. **Conclusion:** A surgical scar becoming painful and swollen during menstruation is the classic symptom of scar endometriosis. Causes include iatrogenic transplantation of endometrium to the surgical wound. Surgical excision is the main treatment.

P58-1489
PREVALENCE, CHARACTERISTICS, COMPLICATIONS, AND PERINATAL OUTCOMES OF NON-SEVERE VERSUS SEVERE FEATURE PREECLAMPSIA AND HELLP

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Problem statement: Hypertension in pregnancy is the common complications during pregnancy, and also a leading cause of maternal morbidity and mortality such as cardiovascular and cerebrovascular diseases, liver and kidney failure, placental abruption, disseminated intravascular coagulation and HELLP syndrome. The worldwide prevalence of hypertension in pregnancy is approximately 2 to 10% which vary according to the difference of the population characteristics, definitions, and criteria of diagnosis. In Thailand, the prevalence of preeclampsia was 1.9% and Srinagarind Hospital reported 0.96% severe preeclampsia. The primary objective of this study was to determine the prevalence of preeclampsia (PE) among pregnant women, and also evaluated the characteristics, maternal complications and perinatal outcomes between non-severe versus severe feature PE and HELLP. **Methods:** A retrospective descriptive study was conducted at Srinagarind Hospital, Khon Kaen University, Thailand. A total of 213 pregnant women diagnosed PE according to ACOG definition from January to December 2016 who delivered at Srinagarind Hospital were enrolled. The prevalence of PE was estimated and reported in percentage. Various characteristics were compared between non-severe versus severe feature PE with HELLP groups using Chi-square test and Student t-test. **Results:** From a total of 11,199 deliveries during the period of study, 213 preeclamptic women were identified (overall prevalence of PE was 1.9 per 1000 deliveries); 107 women (50.2%, 0.96 per 1000 deliveries) were diagnosed non-severe feature PE, 90 women (42.3%, 0.9 per 1000 deliveries) were diagnosed severe feature PE and 16 women (7.5%; 0.01 per 1000 deliveries) were diagnosed HELLP syndrome. Fifty-eight women (27.2%) were diagnosed at gestational age before 34 weeks; early-onset PE, and nighty-seven women (45.5%) delivered at gestational age before 37 weeks. Twenty-one women (9.9%) had postpartum hemorrhage; 11 women (10.3%) among non-severe feature PE and 10 women (9.4%) in severe feature PE. Placental abruption (3 women; 1.4%) and heart failure (1 women; 0.4%) had only among severe feature PE group. Low birth weight (35.1% versus 74.3%, p0.001), birth asphyxia (4.4% versus 18.2%, p=0.001), NICU admission (7.0% versus 30.9%, p0.001) and neonatal resuscitation (15.8% versus 42.7%, p0.001). Stillbirth (3 women; 1.4%) had only among severe feature PE group and intrapartum death was more among severe feature PE group but without statistical significance (2.6% versus 6.4%, p=0.190) **Conclusion:** The prevalence of preeclampsia was not difference and severe feature PE with HEELP was associated with higher rates of maternal severe morbidity and perinatal outcomes.

P59-1259
THE RISK OF RECURRENT CAESAREAN SECTION FOR LABOUR DYSTOCIA IN WOMEN UNDERGOING TRIAL OF LABOUR

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Problem statement: The rates of caesarean section (CS) are increasing worldwide. CS leads to an increased risk for maternal and neonatal complications in the subsequent pregnancy and labour. Previous studies suggest that the mode of delivery with the least maternal morbidity for a woman with a history of previous CS is a successful trial of labour (TOL). The risks of unsuccessful TOL are higher than the risks of scheduled repeat CS. However, prediction of successful TOL is difficult. Data on TOL, including induction of labour (IOL), in women with a history of previous CS for failed induction or labour dystocia in the first or the second stage of labour is limited. In this study, our primary aim was to evaluate the success of TOL, including IOL, in women with a history of previous CS for labour dystocia. We also wanted to assess pre-labour risk factors for repeat CS for labour dystocia. **Methods:** This retrospective cohort study included 660 women with a previous lower segment transverse CS for labour dystocia undergoing IOL or spontaneous onset of labour. Labour induction was carried out by amniotomy and oxytocin, and in case of an unfavourable cervix (Bishop score 6), a single 50 ml Foley catheter or misoprostol were first used for cervical ripening. The primary outcomes were rates of vaginal delivery and repeat CS for dystocia. The secondary outcomes were uterine rupture, postpartum haemorrhage ≥ 1000 ml, maternal intrapartum and postpartum infections, placental retention, and neonatal primary outcomes (pH 7.05, 5-minute Apgar-score 7, and BE -12). Results: A total of 226 (34.2 %) women underwent IOL and 434 (65.8 %) women had spontaneous onset of labour. The rate of vaginal delivery was 72.9 % and the rate of repeat CS for dystocia was 17.7 %. Four cases (0.6 %) of uterine rupture occurred. The rate of maternal intrapartum infection was 2.9 % and postpartum infection 2.4 %. Post-partum haemorrhage ≥ 1000 ml occurred in 126 (19.1 %) women. Seventeen (2.6 %) neonates had an umbilical cord artery pH 7.05 at birth, and 26 (3.9 %) had a 5-minute Apgar score 7. The women with no prior vaginal delivery had higher rates of CS (31.2 % *vs.* 12.1 %; OR 3.3 [95 % CI 1.9–5.7]; *p*0.001) than the women with a prior vaginal delivery. The women undergoing IOL more often had CS (36.7 % *vs.* 22.1 %; OR 2.0 [95 % CI 1.4-2.9]; *p*0.001) compared to the women with spontaneous onset of labour. The rates of repeat CS for dystocia were higher in women with no prior vaginal delivery compared to women with a prior vaginal delivery (21.2 % *vs.* 5.0 %; OR 5.1 [95 % CI 5.3-11.3]; *p*0.001), and in women with IOL compared to women with spontaneous onset of labour (23.9 % *vs.*

14.5 %; OR 1.8 [95 % CI 1.3-2.8]; *p*=0.003). The risk factors associated with a repeat CS for labour dystocia were no prior vaginal delivery (OR 5.8, [95 % CI 2.5-13.4]; *p*0.001), maternal height 160 cm (OR 1.8 [95 % CI 1.1-3.0]; *p*=0.01) and a birth weight of 4000 g OR 2.4 (1.5-3.8); p0. 001.Conclusions**:** Our results suggest that TOL even with IOL seems a feasible option to scheduled repeat CS for women with a history of previous CS for labour dystocia. However, in case of no prior vaginal delivery, maternal height less than 160 cm and an estimated fetal weight over 4000 g, scheduled repeat CS should be considered.

P60-1148
FOLLICULAR FLUID LEVELS OF ANTI-MÜLLERIAN HORMONE, INSULIN-LIKE GROWTH FACTOR 1 AND LEPTIN IN WOMEN WITH FERTILITY DISORDERS

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Problem statement: Currently, 10-15% of couples at reproductive age suffer from infertility. A better understanding of the composition of the medium in which the developing oocyte occurs coupled with a better understanding of the regulatory processes of reproduction allows for the continuous improvement in the success of infertility treatment. Anti-Müllerian hormone (AMH), insulin-like growth factor 1 (IGF1) and leptin are produced in the granulosa cells and play an important role in controlling the growth and maturation of follicles. Levels of biomarkers in the follicular fluid (FF) reflect the quality of the oocyte and its fertilization potential along with subsequent embryo development. **Methods:** 149 females were enrolled into our study. 73 healthy controls (median age of 26 years) and 76 females with fertility disorders (median age of 32 years) divided into four subgroups: anovulation, endometriosis, fallopian tube damage, unknown reason of infertility. FF was collected from the patients during oocyte retrieval in the process of infertility treatment. FF from the donors of oocytes was collected at the time of oocyte retrieval after stimulation with gonadotropins. Pools of FF from each female were investigated - a mixture of all FF samples with no blood contamination. The levels of AMH, IGF1 and leptin were determined for each sample. Biomarker levels were assayed using the following kits: chemiluminescent kit ACCESS AMH (Beckman Coulter, USA), chemiluminescent kit LIAISON IGF1 (Diasorin, Italy), Quantikine ELISA Human Leptin kit (R&D Systems, USA). All statistical analyses were performed using SAS 9.3 (SAS Institute Inc., USA). Quantitative variables are reported as medians, mean, lower and upper quartile, minimum and maximum. The Wilcoxon test was used to compare the levels of biomarkers in the group of healthy females with the groups of females with fertility disorders. The Kruskal-Wallis test was used to compare the distributions of each biomarker across the age categories. **Results:** IGF1 was the only biomarker for which we have found significantly lower levels in women with fertility disorders in comparison with healthy controls (median value 124.5 ng/ml vs. 106.7 ng/ml, p=0.0036). In the subgroups, we only found statistically significant differences in the levels of the observed biomarkers for the subgroup of anovulatory women in comparison with the group of healthy women. AMH (median value 1.72 ng/ml vs. 3.28 ng/ml, p=0.0042) and leptin (median value 1228 9g/ml vs. 2278 pg/ml, p=0.0089) showed higher levels while IGF1 lower levels (median value 124.5 ng/ml vs. 97.5 ng/ml, p=0.0123). **Conclusions:** Levels of AMH, IGF1 and leptin found in FF are sensitive markers for anovulatory fertility disorders. AMH, IGF1 and leptin levels in FF have no relation to the fertility disorders caused by endometriosis, fallopian tube damage or disorders with unknown ethiology.
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P61-1482
PREDICTORS FOR FAILURE OF VAGINAL DELIVERY: A CASE-CONTROL STUDY

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Problem statement: Unexpected emergency cesarean section in women undergoing a trial of labor has a high risk of bladder injury, postpartum bleeding and fetal injury as well as the morbidity of cesarean delivery. This study was to identify potential predictive factors for failure of vaginal delivery in women undergoing a trial of labor. **Methods:** Retrospective case-control study of singleton pregnancy between 36 and 42 0/7 weeks conducted from 2006 through 2015. A failure of vaginal delivery was defined as a delivery that was initially attempted a vaginal delivery but was converted to emergency cesarean section. As controls, we studied one successful vaginal delivery before the failed one. We used multivariable logistic regression to assess the risk for failure of vaginal delivery. **Results:** Between 2006 and 2015, 1331 trials of vaginal delivery were performed of which 267 (20.0%) failed. Among these women, 238 cases were compared to the date of 244 women who underwent a successful vaginal delivery. Predictors for failure of vaginal delivery were related with maternal pre-pregnant body mass index (OR 1.02), maternal height (OR 0.94 per cm), initial cervical effacement (OR 0.98), initial cervical dilatation (OR 0.73), premature rupture of membrane (OR 0.54), station of descent of the fetal head (OR 0.61 per station more descended), estimated fetal weight ≥3500g as compared to 3500g (OR 2.4). Maternal age, gestational age, rupture of membrane, induction and use of epidural anesthesia were not useful for predicting failed vaginal delivery. **Conclusion:** Failed vaginal delivery can be predicted using both ante- and intrapartum characteristics.

P62-1397
ULTRASOUND METHOD EVALUATION OF LOWER UTERINE SEGMENT IN PATIENTS WITH PREVIOUS UTERINE CAESAREAN SECTION

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Introduction: Caesarean section has reached high prevelence in population, becoming the most common surgical operation for women over the world. However, operation is associated with two important risk factors: the chance of uterus scar rupture during next pregnancy and mother's death. Vaginal delivery is one of the options how to reduce /smooth out increasing value of C-sections. The risk of uterine rupture in the presence of a lower segment C-section scar is related directly to the degree of thinning of the lower uterine segment. Transabdominal ultrasonography is the most common used method to measure myometrium, from which the decision in performing C-section is made. But it is still debatable if the measurements are precise between transabdominal and transvaginal ultrasonography and between women with or without scar on the uterus. No cut-off values have been developed and tested, underlining the need for more standardized measurement techniques and nomenclature. **Objectives**: The aim of prospective cohort study was to compare and to find a correlation between the measurement of lower uterine segment thickness made with transabdominal ultrasonography method and latelly manually made measurements *in vivo* during Caesarean section. **Methods**: Research work was made in Pauls Stradiņš Clinical Univeristy Hospital Maternity care center (Riga, Latvia) and was approved by the local research and ethics committee. Informed content was obtained from all women. During research 414 measurements of lower uterine segment thickness were made for 69 single fetus pregnant women in 38.97 ± 1.124 gestation week. Based on data from anamnesis, patients were divided into 3 groups:

A group- women without a scar on uterus (n=29),

B group- women with history of one performed C-section (n=29),

C group- women with history of performed two or more C-sections (n=11).
All patients underwent transabdominal ultrasound evaluation of the LUS by the same skilled sonographer. On the ultrasound, the lower uterine segment appears as a three- layered structure. We measured only the middle layer of myometrium- the muscular layer. During C-sections measurement were made manualy before suturation of uterus wall. Three measurements were taken during every method.

Results:

Table 1. Group characteristics

Parameter	Result		
	A group (n=29)	B group (n=29)	C group (n =11)
Age, mean ± SD	32.3 ± 6.2	33.72 ± 4.5	34.0 ± 3.5
Body mass (kg), mean± SD	79.8 ± 17.8	86.0 ± 17.5	78.1 ± 11.4
Heigh (cm), mean ± SD	166.35 ±7.2	169.5 ± 4.8	166.5 ± 5.3
BMI (kg/m²), mean ± SD	28.8 ± 5.5	30.0 ± 6.4	28.2 ± 3.7
Adiposity (BMI ≥ 25,1 kg /m²), n (%)	24 (82.8)	24 (82.8)	9 (81.8)
Gestation weeks, mean±SD, min./max.	39.0 ± 0.9	39.1 ± 0.9	38.3 ± 1.7
Interval between pregnancys (years), mean	2.0 [1 ; 6.5]	5.0 [3,0 ; 7,0]	5.0 [3,0; 6.0]
Paritate, n (%)	29 (42.0)	29 (42.0)	11 (15.94)
1	14 (48.3)	0	0
2	9 (31.0)	22 (75.8)	1 (9.1)
3	4 (13.8)	3 (10.3)	5 (45.5)
4	1 (3.4)	1 (3.4)	2 (18.2)
5	1 (3.4)	1 (3.4)	3 (27.3)
6	0	1 (3.4)	0

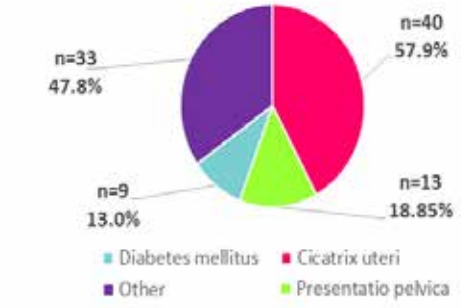

Figure 1. Most common indications for Caesarean section (N=69)

Table 2. Lower uterine segment thickness measurement correlation between available measures from ultrasonography and actual measures made *in vivo*.

	Middle plane		Lateral right plane		Lateral left plane	
	r_s	P<value*	r_s	P< value*	r_s	P<value*
A group (N=29)	0,540	**0,03**	0,238	0,214	0,225	0,240
B group (N=29)	0,154	0,426	0,420	0,830	-0,073	-0,707
C group (N=11)	0,165	0,628	0,057	0,869	0,268	0,426

* Spearman's rank correlation test

Statistically reliable correlation between measurements from Usg and C-section were discovered only for group A patients (N=29) and in only one of three measurements- in a middle plane of myometrium (p=0,03). In both groups- B and C- there was no statistically significant correlation between the sonographic mean LUS thickness and the surgical LUS grade.

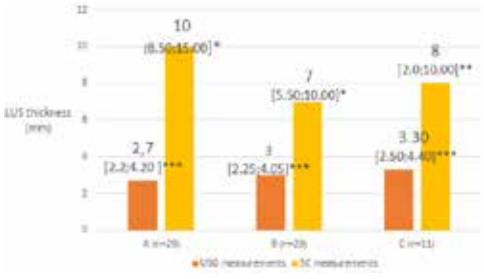

Figure 2. Image represent mean score and interquartile range in uterine wall middle plane measurements what was made with ultrasound and during C-section. **Mann Whitney Test* with p value p, 0,008, ** *Kruskal Wallis tests* p0,07, ***Kruskal Wallis* test p0,923

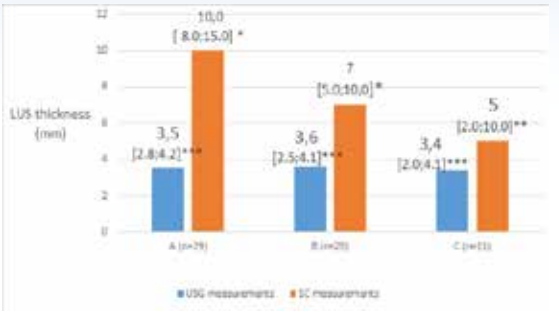

Figure 3. Image represent mean score and interquartile range in uterine wall lateral –right- plane measurements what was made with ultrasound and during C-section. **Mann-Whitney test* p0,001, ** *Kruskal Wallis test* p0,001, *Kruskal Wallis* test p0,780

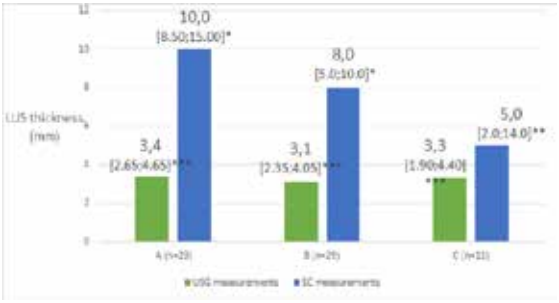

Figure 4. Image represent mean score and interquartile range in uterine wall lateral left plane measurements what was made with ultrasound and during C-section. **Mann Whitney test* p0,022, *Kruskal Wallis test* p0,036, *** *Kruskal Wallis test* p0,445. Analysing phenotypic indicators of patients, three statistically important correlations were discovered: the thickness of myometrium correlates with – 1) BMI A group p=0,097; B group p=0,024; C group p= 0,020, 2) shorter interval between pregnancies p0,0016, 3) patients age p=0,020-0,039. Next task was to compare thickness of myometrium between group A and group B patients, the results are 10.00 [8,5;15] vs 7,00 [5,50;10,00]; p=0,008. **Conclusion:** Our finding indicates that ultrasound method in third trimester is only informative for pregnant women without any scar on uterus. Women who had not performed Caesarean section, had thicker myometrium than women who had performed Caesarean section. Women with a scar on uterus, should consider all possible complications based on measurements not only from ultrasonography, but also must evaluate BMI, interdelivery interval and patients age, when deciding whether to perform operation. We suggest that second trimester measurements for LUS is very important and can predict possible rupture of uterus wall in the third trimester.

P63-1219

WHICH IS BETTER PREDICTION MARKER FOR LIVE BIRTH PREDICTION IN PATIENTS AGED OVER 40 WITH THEIR FIRST IVF TREATMENT?

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Problem statement: To evaluate clinical utility of antral follicle count (AFC) and anti-Müllerian hormone (AMH) in predicting in vitro fertilization (IVF) outcomes among the patients over 40 years old in their first IVF cycles. **Methods:** Total 219 patients aged 40 or older who underwent their first IVF with gonadotropin-releasing hormone antagonist protocol from January 2013 to September 2014 in CHA Gangnam fertility center were retrospectively analyzed. AFC and serum samples were measured prior to IVF treatment. The main outcomes were clinical pregnancy rate and live birth. **Results:** 36 out of 219 patients achieved clinical pregnancy (16.4%) and 27 out of 219 patients delivered (12.3%). The receiver operating characteristic curve analysis to predict clinical pregnancy showed that both age and AFC equally had higher accuracy by area under the curve (AUC=0.657, P0.01) than serum AMH (AUC 0.613, P=0.03). The optimum cut-off value of age was ≤41 and that of AFC was 3 to predict clinical pregnancy. For the prediction of live birth, AFC had

the highest accuracy (AUC 0.698, P0.01), followed by age (AUC 0.674, P0.01) and the number of total retrieved oocytes (AUC 0.620, P=0.02). The optimum cut-off value of age was ≤41, that of AFC was 3 and that of the number of total retrieved oocytes were 6. With multivariate regression analysis, age and AMH were significantly correlated with clinical pregnancy (age, odds ratio [OR] 0.53, P0.01; AMH, OR 1.31, P=0.04), whereas age and AFC were association with live birth significantly (age, OR 0.41, P0.01; AFC, OR 1.10, P=0.02). **Conclusion:** In patients aged over 40, AFC was shown to be a better biomarker than AMH for the prediction of live birth. AMH was positively correlated with clinical pregnancy but had no association with live birth. To predict the live birth, age ≤41, AFC 3 and total retrieved oocytes 6 appeared to be meaningful. This study demonstrated the significance of AFC as a predictor of live birth for old aged women at their first IVF cycle with gonadotropin-releasing hormone antagonist protocol.

Table 1. Area under curve of ROC analysis for age, AFC, AMH, FSH, number of total retrieved oocyte and specific cut-off values for prediction of clinical pregnancy

	Area under curve	95% CI	Cut-off value	Sensitivity	Specificity	+LR	-LR	P-value
Age (yr)	0.657	0.59-0.72	≤41	93.9	38.7	1.53	0.16	<0.01
AFC	0.657	0.59-0.72	>3	90.9	38.7	1.48	0.23	<0.01
AMH (ng/mL)	0.613	0.55-0.68	>0.26	97.0	24.2	1.28	0.13	0.03
Basal FSH (mIU/mL)	0.529	0.46-0.60	≤15.9	93.6	21.1	1.20	0.31	NS
No of total retrieved oocyte	0.534	0.47-0.60	>6	48.5	61.8	1.27	0.83	NS

Note: +LR: likelihood ratio positive, -LR: likelihood ratio negative, FSH: follicle stimulating hormone, AMH: anti-mullerian hormone, NS: not significant ($P>0.05$). Values are given as mean ± standard deviation

Table 2. Area under curve of ROC analysis for age, AFC, AMH, FSH, number of total retrieved oocyte and specific cut-off values for prediction of live birth

	Area under curve	95% CI	Cut-off value	Sensitivity	Specificity	+LR	-LR	P-value
Age (yr)	0.674	0.61-0.74	≤41	96.0	37.3	1.54	0.11	<0.01
AFC	0.698	0.63-0.75	>3	92.0	37.6	1.48	0.21	<0.01
AMH (ng/mL)	0.609	0.53-0.68	>0.26	96.3	23.4	1.26	0.16	NS
Basal FSH (mIU/mL)	0.522	0.45-0.59	≤15.9	95.7	20.8	1.21	0.21	NS
No of total retrieved oocyte	0.620	0.55-0.68	>6	59.3	63.0	1.60	0.65	0.02

Note: +LR: likelihood ratio positive, -LR: likelihood ratio negative, FSH: follicle stimulating hormone, AMH: anti-mullerian hormone, NS: not significant ($P>0.05$). Values are given as mean ± standard deviation

Table 3. Multivariate logistic regression analysis of the relationship between clinical pregnancy or live birth and selected variables

Variables	Clinical pregnancy		Live birth	
	Odds ratio (95% CI)	P value	Odds ratio (95% CI)	P value
Age	0.53 (0.34-0.83)	<0.01	0.41 (0.23-0.73)	<0.01
AFC	1.07 (0.98-1.17)	NS	1.10 (1.02-1.19)	0.02
AMH	1.31 (1.02-1.69)	0.04	1.22 (0.91-1.65)	NS
FSH	1.00 (0.94-1.06)	NS	0.99 (0.92-1.06)	NS
Total retrieved oocyte	1.04 (0.93-1.17)	NS	1.09 (0.96-1.23)	NS

Note: AFC: antral follicle count, AMH: anti-mullerian hormone, FSH: follicle stimulating hormone, NS: not significant ($P>0.05$). Values are given as mean ± standard deviation

P65-1558
UNFAVORABLE BEHAVIOR AND ENVIRONMENT IN POOR PREGNANCIES OUTCOMES

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Introduction: The purpose of prenatal care is to evaluate maternal and fetal health and to identify risk factors for adverse pregnancy outcomes. The objective of the present study was to determine pregnancies with inadequate prenatal care, maternal behavior, environment risk factors and adverse pregnancy outcomes. **Methods:** We realized a retrospective study that included the evaluation of medical records regarding the births of the Bucur Maternity Hospital, the "St. John ", Bucharest during the years 2015-2016. We focused our attention in patients without prenatal care and associated behavior risk factors. **Results:** Our study included a total of 3937 patients. We identified that 12,43% cases of pregnancies had inadequate prenatal care. The patients without prenatal care underwent vaginal delivery in 68.07% cases, cesarean section in 26.63% and 5.29% vaginal deliveries outside the hospital without medical assistance. We identified as the maternal risk factors: adolescent pregnancies, low body mass index (BMI), infectious diseases, behavioral risk factors such as smoking, addictive substances abuse or exposure to other toxic substances. We observed that 37% of those cases were low BMI (18 kg/m^2) and 16.38% adolescent pregnancies. Smoking was revealed in 34.2% cases, whereas drug abuse in 0.5 % cases. There were 0.05 cases that reported exposure to other substances (at work - in agriculture or factories). **Conclusion:** A significant number of women had inadequate environment and behavior prenatal care. Patients should be informed about the consequences of inadequate prenatal care and authorized official medical attitude is necessary.

P66-1560
UNCONVENTIONAL TREATMENT FOR INTRAEPITHELIAL CERVICAL NEOPLASIA -CASE REPORT AND LITERATURE REVIEW

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Introduction: Benefits of natural cytotoxic as extracts of Licorice for cancer treatment are reported by many studies. Licorice polyphenols induce apoptosis in cancer cells buttheir use for preoneoplasic lesions are less investigate. **Case report:** We report the case of a 32 years old women nuligesta, HPV 16 positive and persistent LSIL. In mai 2015 she underwent ERAD for persistent colposcopi lesion onsistent for low rade dysplasia. The histological result was CIN1. HPV remained positive and repetead cytology also remained positive for LSIL. The patient had no other risk factors (no smoking, one sexual partner) and was very anxios asking for a treatment that could resume the cervical lesion and avoid further implication on her obstetrical prognosis. We prescribed a combination of topical and oral treatment with Glycyrrhizic acid derived from Licorice root. Glycyrrhizic acid was reported to act as inhibitor of lipoxygenase and cyclooxygenase, protein kinase C, and downregulates the epidermal growth factor receptor. After 3 months of treatment we repeated cytology and colposcopy that were negative for intraepitelial or malignant lesion and only minor colposcopic changes associated with reparation. At one year HPV was negative, cytology and colposcopy normal. Many studies report the effects that Licorice can have anti-inflammatory, antivirus, antiulcer, anticarcinogenesis. The Licorice Constituents Glycyrrhizin and aglycone Glycyrrhizic acid, various polyphenols, and polysaccharides are reported to induce apoptosis on some neoplazic cells (i.e prostate cancer cells) to protect against carcinogen-induced DNA damage and to act as suppressive agents l. **Conclusion:** Considering the succes reproted for our patient Licorice could prove effective also for treating intraepithelial lesions of the cervix and prevent their evolution towards more severe condition.

P67-1151
MANAGEMENT OF A GIANT UTERINE LEIOMYOMA - A CASE REPORT

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Problem statement: Uterine leiomyomas are the most common tumour of the female reproductive tract but giant myomas (greater than 11.4kg) are exceedingly rare. They may be life threatening by causing pressure effects on the heart, lungs and adjacent organs. We present a case of a 53-year-old woman with a massive uterine fibroid and discuss the multidisciplinary approach in management of this complex surgical patient. This case illustrates the importance of proper surgical management and peri-operative care in ensuring good outcome following excision. **Methods:** This is a case report studying the peri-operative management of a patient with a giant

uterine leiomyoma. Case files and medical records of the patient were retrieved and analysed. **Results:** A 53-year-old Malay woman with a background of schizophrenia presented with a large abdominal mass complicated by orthopnea and exertional dyspnea. Computed tomography scan revealed a 45.0 x 38.5-centimeter lobulated abdominopelvic mass suggestive of a fibroid with gross ascites. Prior to surgery, she was extensively worked up for potential complications of the mass with a lung function test and an echocardiogram. She also had a transabdominal ascitic drain inserted for temporary relief of abdominal distension. She successfully underwent a total abdominal hysterectomy bilateral salpingo-oophorectomy with frozen section by the gynaecology surgeons and the remaining abdominal wall defect was reconstructed by the plastic surgery team. The excised specimen weighed 27.8kilograms which included a benign subserosal leiomyoma measuring 64 x 50.5 x 15centimeters. Intra-operative blood loss was 7 litres, requiring three activations of the Massive Transfusion Protocol. Post-operatively, she was closely monitored in the Intensive Care Unit for management of haemorrhagic shock and coagulopathy. She made good recovery and was discharged on post-operative day 7. **Conclusion:** Surgical excision of giant uterine leiomyomas is not only technically challenging, but also carries a high rate of morbidity and mortality given the risks of massive haemorrhage and postoperative complications. We explore the use of the National Massive Transfusion Protocol initially created for the management of severe blood loss in military trauma settings which has then been extended for use in complicated surgical and obstetric patients. This case illustrates the pivotal role of multidisciplinary care in the management of complicated surgical patients and the need for comprehensive pre-operative assessment, optimal intra-operative management and careful post-operative care.

P68-1421
IDENTIFICATION OF RISK FACTORS IN PATIENTS WITH POSITIVE LYMPH NODE AFTER RADICAL HYSTERECTOMY FOR EARLY STAGE CERVICAL CANCER

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Problem Statement: To Identify Risk Factors In Patients With Lymph Node Metastasis After Radical Hysterectomy For Early Stage Cervical Cancer. **Methods:** The Medical Records Of Patients With Early-Stage Cervical Cancer With Lymph Node Metastasis After Radical Hysterectomy And Lymph Node Dissection Conducted From March 2006 To December 2015 At The Gil Medical Center Were Retrospectively Analyzed. Patients That Received Chemotherapy, Radiation Therapy Or Concurrent Chemoradiotherapy Before Surgery And Patients With Neuroendocrine Or Sarcoma Histology Were Excluded. Histological Tumor Type, Tumor Size, Lymph-Vascular Space Invasion, Parametrial Involvement, Number Of Positive Nodes, And Involvements Of Common Iliac Nodes And Paraaortic Lymph Nodes Were Assessed And Correlations With Tumor Recurrence Were Sought. **Results:** We Analyzed 523 Patients With Figo Stage Ib To Iia Cervical Carcinoma That Underwent Radical Hysterectomy With Lymph Node Dissection. Pathological Analyses Of Surgical Specimens Showed Positive Lymph Nodes In 127 Patients (24.3%). When The Above-Mentioned Variables Were Subjected To Cox Proportional Regression Analysis, Parametrial Infiltration And Metastatic Lymph Nodes (??/Span> 5) Were Found To Be Significantly Correlated With Disease-Specific Survival. Using These Two Factors, Node-Positive Patients Were Divided Into Low-Risk (N=57), Intermediate-Risk (N=47), And High-Risk (N=23) Groups. Disease Specific Survival For The High-Risk Group Was Significantly Poorer Than For The Intermediate And Low-Risk Groups. **Conclusion:** The Prognosis Of Node Positive Patients After Radical Hysterectomy Was Found To Be Different According To Clinicopathologic Risk Factors. Current Adjuvant Therapy Strategies After Surgery May Not Be Sufficient For Patient With Positive Nodes. New Strategies That Improve Survival Should Be Considered For Such Patients.

P69-1224
DO MEN BENEFIT FROM LETROZOLE FOR THE TREATMENT OF MALE INFERTILITY?

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Problem statement: There is currently no consensus for the treatment of men with idiopathic infertility. Pavlovich et al. identified a group of hypoandrogenic men with low T/E2 ratio with idiopathic infertility that benefited from treatment with testolactone, an aromatase inhibitor[1]. Aromatase is an enzyme which coverts testosterone to estradiol and androstenedione to estrone. Aromatase inhibitors like Letrozole and Testolactone can increase endogenous testosterone production without any increase in circulating estrogens as seen with estrogen receptor modulators like clomid. This approach has been applied to those with T/E2 ratio less than 10 since the publication of Cavallini et. al[2,3]. However, the number of men with T/E2 ratio less than 10 constitutes only a small population of men with idiopathic infertility. **Methods:** This is a prospective study at KK Women's and Children's Hospital which was approved by IRB and Health Science Authority of Singapore from February 2015 to March 2017. Informed consent was taken from all participants. All men who had sperm density of less than 5 million were worked up as per the hospital's protocol and were excluded from the study if there was a known cause for low sperm count. Men with idiopathic oligozoospermia and non-obstructive azoospermia were recruited. Serum testosterone (T) and estradiol (E2) levels were measured upon recruitment. All men had Letrozole 2.5mg per day for 4 months. Serum testosterone, serum estradiol and sperm analysis were repeated upon completion of treatment. Embryologists reporting the semen analysis were blinded to the study. We recruited 29 men who fulfilled the inclusion and exclusion criteria and who were agreeable to take Letrozole as treatment for their male infertility. 1 patient dropped out of the study after taking 3 weeks of medication as his wife achieved a spontaneous pregnancy. 28 men completed 4 months of Letrozole. **Results:** The mean age of the population was 37.3 years and the mean BMI was 27.2 kg/m^2. 4 of 28 men (14.3%) had T/E2 levels less than 10. Common side effects included loss of libido, headache, fatigue and weakness but nobody dropped out of the study because of side effects. All of them had an improvement in T/E2 ratio after treatment (p0.0001) (Table 1). There was improvement in the density of sperm post treatment for the whole population (p=0.0004), but subgroup analysis of men with T/E2 ratio less than 10 did not reach statistical significance (p=0.5) (Table 2). **Conclusion**: T/E2 ratio improved in all patients who took Letrozole regardless of their pre-existing T/E2 ratio and there was statistical improvement in sperm density for the entire group after treatment with Letrozole. The frequency of low T/E2 ratio is only 14% in our study and Letrozole can potentially be given to more patients if we use it for treatment of idiopathic oligozoospermia regardless of the T/E2 ratio. Considering the relatively small sample size, further work is needed to validate these findings.

References:

Pavlovich CP, King P, Goldstein M, Schlegel PN. Evidence of a treatable endocrinopathy in infertile men. The Journal of Urology 2001 Aug;8(4):1330-3.

Cavallini G, Beretta G, Biagiotti G. Preliminary study of letrozole use for improving spermatogenesis in non-obstructive azoospermia patients with normal serum FSH. Asian Jounal of Andrology (2011) 13, 895-897.

Cavallini G, Biagiotti G, Bolzon E. Multivariate analysis to predict letrozole efficacy in improving sperm count in obstructive azoospermic and cryptozoospermic patients: a pilot study. Asian Journal of Andrology (2013) 15, 806-811.

P70-1501
THE ACCURACY OF FETAL ULTRASOUND FOR PREDICTING SEQUELAE IN FETUSES INFECTED WITH CONGENITAL CYTOMEGALOVIRUS AFTER PRIMARY MATERNAL INFECTION

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Problem statement: Cytomegalovirus infection is the most common fetal viral infection worldwide that can lead to severe long-term medical conditions. Antenatal diagnosis of primary cytomegalovirus infections with proven fetal transmission and so potential adverse perinatal outcomes and long-term complications, is a major challenge in perinatology. In cases of proven primary cytomegalovirus infection there is a need to improve the prenatal counseling offered to patients and guide future clinical management decisions. The aim of the study was to evaluate the accuracy of fetal ultrasound for predicting sequelae in fetuses infected with congenital cytomegalovirus after maternal primary infection. **Methods:** A

prospective observational study was conducted from 1996 through 2012 in pregnant women with serological evidence of primary cytomegalovirus infection and proven vertical transmission to the fetus, based on viral load in the amniotic fluid. All patient underwent a prenatal ultrasound. Termination of pregnancy was offered in patients with proven fetal cytomegalovirus infection. Live-born, congenitally infected infants underwent hearing and neurological clinical assessments to detect symptoms of cytomegalovirus infection. **Results:** Among a cohort of 355 pregnant women with primary cytomegalovirus infection, a total of 67 patients with proven vertical transmission were included in this study, including 64 singletons and 3 twin pregnancies (69 fetuses). Eight fetuses were lost to follow-up and so a total of 61 congenitally infected fetuses were included in the final analysis. Of these remaining 61 fetuses, termination of the pregnancy was performed for 26. In 11 of these 26 cases ultrasound demonstrated abnormal findings. Autopsy provided in all 26 cases histological evidence of fetal cytomegalovirus infection. In the 15 terminated fetuses without ultrasound anomalies, autopsy revealed histopathological cytomegalovirus lesions in 13 cases, including 6 anomalies in the central nervous system and 7 cytomegalovirus inclusions in the lung, liver, pancreas and adrenal glands. Isolated placental cytomegalovirus inclusions were reported in 2 fetuses. Among the 35 live-born infants, targeted prenatal ultrasound revealed abnormal findings suggestive of congenital infection in 12 fetuses. Of these 12 infants, 6 had normal clinical evaluations, whereas 6 presented with either hearing and/or neurological anomalies, classified as severe in 4 cases. Among the other 23 live-born infants with no abnormalities during their prenatal ultrasounds, 5 presented with audiological sequelae and 1 was diagnosed with neurological developmental delay. **Conclusion:** Fetal ultrasound anomalies were detected in 37.7% of pregnant women with primary cytomegalovirus infection acquired in early pregnancy and proven fetal infection, and were confirmed by autopsy or postnatal clinical evaluation in 73.9%. Cytomegalovirus-related anomalies were also detected by autopsy or postnatal clinical evaluation in 55% of infants with normal fetal ultrasound evaluations. These results confirm the correlation between prenatal ultrasound anomalies and postnatal clinical sequelae in fetuses with congenital cytomegalovirus. Though, it is important to realize that, a completely normal prenatal ultrasound assessment does not guarantee a normal clinical outcome.

P71-1483
ANTIOXIDANTS FOR FEMALE SUBFERTILITY – A SYSTEMATIC REVIEW

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Background: A couple may be considered to have fertility problems if they have been trying to conceive for over a year with no success. This may affect up to a quarter of all couples planning a child. It is estimated that for 40% to 50% of couples, subfertility may result from factors affecting women. Many subfertile women undergoing treatment also take dietary supplements in the hope of improving their fertility. This can be a very costly and stressful time for women and their partners. It is important that these couples be given high-quality evidence that will allow them to make informed decisions on whether taking a supplemental antioxidant when undergoing fertility treatment will improve their chances or cause any adverse effects. This is especially important, as most antioxidant supplements are uncontrolled by regulation. Antioxidants are thought to reduce the oxidative stress brought on by these conditions. Currently, limited evidence suggests that antioxidants improve fertility, and trials have explored this area with varied results. This review assesses the evidence for the effectiveness of different antioxidants in female subfertility. **Methods:** The meta-analysis was performed as per the Cochrane manual. Databases were searched and studies were selected based on the following inclusion criteria: randomised controlled trials (RCTs) that compared any type, dose or combination of oral antioxidant supplement with placebo, no treatment or treatment with another antioxidant, among women attending a reproductive clinic. We excluded trials comparing antioxidants with fertility drugs alone and trials that only included fertile women attending a fertility clinic because of male partner infertility. The primary review outcome was live birth; secondary outcomes included clinical pregnancy rates and adverse events. **Results:** We included 50 trials involving **6510 women**. Investigators compared oral antioxidants, including combinations of antioxidants, *N*-acetyl-cysteine, melatonin, L-arginine, myo-inositol, *D*-chiro-inositol, carnitine, selenium, vitamin E, vitamin B complex, vitamin C, vitamin D+calcium, CoQ10, pentoxifylline and omega-3-polyunsaturated fatty acids versus placebo, no treatment/standard treatment or another antioxidant. Low-quality evidence suggests that **antioxidants may be associated with an increased live birth rate** compared with placebo or no treatment/standard treatment (OR 2.13, 95% CI 1.45-3.12, P0.001, 8 RCTs, 651 women). This suggests that among subfertile women with an expected live birth rate of 20%, the rate among women using antioxidants would be between 26% and 43%. Low-quality evidence suggests that **antioxidants may be associated with an increased clinical pregnancy rate** compared with placebo or no treatment/standard treatment (OR 1.52, 95% CI 1.31 to 1.76, P0.001, 26 RCTs, 4271 women). There was insufficient evidence to determine whether there was a difference between the groups in rates of miscarriage (OR 0.79, 95% CI 0.58-1.08, P = 0.14), multiple pregnancy (OR 1.00, 95% CI 0.73-1.38, P = 0.98) and gastrointestinal disturbances (OR 1.55, 95% CI 0.47-5.10, P = 0.47). The overall quality of evidence was limited by serious risk of bias associated with poor reporting of methods, imprecision and inconsistency. Conclusions: This review has shown that there is low-quality evidence that **taking antioxidants may provide benefit for subfertile women by improving live births and clinical pregnancies.** There was insufficient evidence to draw any conclusions about the adverse effects of miscarriage, multiple births or gastrointestinal effects. In a world with increased access and resources spent on complementary and supportive treatments for subfertility it is important to have good quality evidence to support their use. This increased focus is highlighted by having almost twice as many studies in this review compared to that published in 2013, which found no significant difference in outcomes. Unfortunately, the quality of these new studies is poor. Therefore, further high-quality research is needed to strengthen the association between antioxidants and subfertility outcomes and provide women with stronger evidence of benefit or harm.

P72-1326
ROLE OF ANTIPHOSPHOLIPID SYNDROME IN THE STRUCTURE OF REPRODUCTIVE LOSSES

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According to the recent data, the cause of miscarriage and development of obstetric complications in 70-75% of cases are various violations of hemostasis and among them, 27-42% cause is the antiphospholipid syndrome (APS). In pregnant women with APS, there is an increase in the coagulation potential with signs of intravascular pathologic thrombogenesis combined with an increase in thrombophilia markers, which is aggravated during pregnancy against an adaptive increase in coagulation. Circulation of antiphospholipid antibodies is the determining factor in the development of the unpleasant course of pregnancy and perinatal outcomes. The aim of the study was to analyze and identify the reasons for the hospitalization of women with miscarriage in the gynecological department of the Tashkent Medical Academy (TMA) for the period from 2013 to 2015. During this period, 9,278 women applied, of which 6,680 (72.1%) were hospitalized for spontaneous abortions, with started, incomplete miscarriages and with undeveloped pregnancies. The age of women ranged from 20 to 37 years, the average age was 25.6 ± 2.4 years. Primary pregnant were 1028 (15.4%), patients with 2-3 pregnancies and 4 or more pregnancies made up 3120 (46.7%) and 2532 (37,9%) respectively. During gestational analysis, it was found that up to 6 weeks of pregnancy, abortion occurred - in 12.4% women, in the period of 7-12 weeks - in 48.3%, 13-16 weeks - in 24, 4% of pregnant women, and 14.9% of patients had abortion at a period of more than 16-22 weeks of gestation. All women underwent blood coagulation analysis. The obtained data revealed deep violations in the blood coagulation system of pregnant women: 89.3% had hypercoagulability; in 43% of patients - increased platelet aggregation; 36% had thrombocytopathy. In 19% of pregnant women, hemostasis analysis (positive test for the presence of lupus anticoagulants, anticardiolipin antibodies) was diagnosed with APS. All women with APS, in addition to therapy aimed at improving the rheology of blood (low molecular weight heparin, antiaggregants), while maintaining the threat of interruption pregnant women received hormonal support (dydrogesterone) until 20 weeks of pregnancy. Thus, the findings indicate a high incidence of abortion in the early stages. At the same time, abortion is the most often observed at gestational period until 12 weeks (60.7%). Almost every 5th women with reproductive losses were diagnosed with APS (19%). In the specific therapy of women with APS in 72% of cases, pregnancy was

prolonged and urgent deliveries occurred.

P73-1429
SEARCH FOR WAYS TO REDUCE THE FREQUENCY OF OPERATIVE LABOR IN WOMEN WITH A SCAR ON THE UTERUS

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Correct and timely diagnosis of the scar integrity on the uterus after the previous cesarean section (CS) is the main reserve for reducing the frequency of operative labor. The frequency of operative labor in different countries varies between 15 - 45%, and in the Tashkent, Medical Academy (TMA) clinic - 37 - 42%. At the same time, per the data of various authors, the frequency of repeated operations of the CS fluctuates between 30% and 80%. This indicator in TMA for the period from 2015-2017. amounted to 17.2%. In recent years, the method of vaginal delivery after the previous CS has become of special importance, the success of which depends on several factors (cervical maturity, development of regular labor, echo-dopplerometric data of scar availability, scar type and psychological mood of a woman for vaginal birth). In addition, in diagnosing the consistency of the scar on the uterus, attention is increasingly focused on echodopplerometric studies that significantly affect the outcomes of pregnancy and childbirth in women with a scar on the uterus. An important role is played by the psychosomatic state of a woman, which often leads to an unreasonable refusal of a woman with a scar on the uterus from natural childbirth. A retrospective analysis of the history of delivery of 90 women with an operated uterus in anamnesis and a prospective analysis of the course of pregnancy and childbirth of 60 women with CS in the anamnesis was made. To carry out the research, studies were made: clinical and anamnestic study, study of the degree of anxiety with the help of Spilberg and Luscher tests, laboratory, gynecological, instrumental (ultrasound, dopplerometry), assessment of cervical maturity on the Bishop scale. The age of women was in the range from 20 to 45 years: from 20 to 25 years - 38%, 26-30 years - 31%, 31-35 years - 16%, 35-40 - 11%, 41-45-4% both groups of the study, the mean age was 27.2 ± 2.2 years. Retrospective analysis showed that natural birth was in 12%, and repeated operation of CS in 88% of women, with indications of cardiac pathology (36%), premature rupture of fetus mambrane (22%), women`s rejection of vaginal birth (20%). It is remarkable that vaginal delivery was in women with only one scar on the uterus. At the same time, a prospective group analysis revealed that 26% of women were delivered by VBAC, and repeated abdominal delivery was performed in 74% of pregnancies. In the prospective group, the most frequent indications were a woman`s refusal of vaginal birth (psychological component-25%), lack of readiness for delivery (16%). Out of 60 women with scars on the uterus of prospective analysis, 24 (40%) were enrolled in the first stage of labor and were consulted about vaginal delivery. The scar on the uterus is investigated on the ultrasound, dividing it into 3 segments, measuring their thickness and type, determining the blood flow of the radial arteries in the rumen area with dopplerometry. In 66.6% of the examined women, the delivery resulted in VBAC with normal blood flow of the radial arteries, and in 33.4% of women by repeated operative delivery. Analysis of the level of psychosomatic state and degree of anxiety revealed that 16.7% of women had a high degree, 12.5% had an average degree of personal anxiety, which probably influenced the outcome of childbirth. Thus, in the management of labor in women with a scar on the uterus, factors such as psychosomatic status, degree of anxiety and scar status per ultrasound and dopplerometry play a decisive role in the outcome of birth.

P74–1553
BEHAVIOR AND DIET IN CERVICAL CANCER-CASE SERIES REPORT AND LITERATURE REVIEW

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Introduction: Cervical cancer is reported as the second leading cause of death in women worldwide. Romania is placed on the first place regarding cervical cancer mortality, with rates 2–2.7-fold higher than in other Central or East European countries. Recent studies revealed the importance of the diet and behavior habits on specific types of neoplasia, raising interest in the analysis of dietary compounds. **Methods:** We analyzed the important data bases about diet on cervical cancer. We focused on the importance of different molecular types and interactions between them in cervical cancer therapy results. Our concerned was determined by cases diagnosed and treated in our clinic. **Results:** We report the 23 cases of patient who presented in our clinic for vaginal bleeding between 2012 - 2014. For all the patients after genital examination the cervical cancer was suspected and cervical biopsy was performed. In all cases cervical scuamos cancer was confirmed. None of the patients were screened in the National Cervical Cancer Program. After complet imagistic and paraclinical examination the staging of the disease was stage III A and B cervical cancer. All the patients were treated according to the international protocol for cervical cancer. 13 of them (group A) decided to change their life style after consulting a specialist in nutrition. They received Flavan-3-ols as a supplement with potential pharmacologic compounds for cervical cancer adjuvant therapy. The change in diet consisted in consuming increased amount of apricots plums, berries and cherries, and high flavonoid containing food as chocolate, red wine and different teas such as *Camellia sinensis*. The other 8 patients did not accept the change of diet. We aseased the survival rate after 2 and 3 years which was of 7 in the group A and 3 in the group B. **Conclusions:** Behavior and diet can influence not only the risk of cancer but also the therapy response and survival rate. We don't have sufficient information about specific diet that could improve the outcome in cervical cancer. Our case series is limited but it raises the awareness that behavior and diet could represent adjuvant therapy for standard cancer treatment protocols.

P75-1556
PARENTAL MOTIVATION IN MEDICAL TERMINATION OF PREGNANCY - OUR EXPERIENCE

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Introduction: Termination of pregnancy on medical background was restricted in Romanian legislation until 1990 and inconsistent since then. The Penal Code of 2013 is the provide the only legal frame for medical based pregnancy termination but the situation when this is permitted are not clearly defined. Therefore, the parental motivation for such decision should be considered in order to make future norms more consistent. **Methods:** We performed a retrospective study on the pregnancy termination performed in our clinic between 2013-2016 on fetal anomalies ground in order to asses a pattern of the parental motivation request of pregnancy termination. **Results:** Between 2013-2016 there were performed 26 therapeutic abortions in our clinic out of 65 diagnosed anomalies. The indications were in 10 cases for plurimalformative syndrome, 6 cases of T21 diagnosis, 5 for CNS anomalies including isolated spina bifida,4 cases for cardiac anomalies, 1 case for achondroplasia. The majority of the couples considered the neurological and behavioral complication, followed by the somatic aspect of the baby. For the remaining dignosed cases the least important seemed to be the cardiac defects and the suspicion of artrogripozis. One of the main concern of the parents was the cause of the anomaly and the risk of recidive. **Conclusion:** Parental motivation for pregnancy termination based on medical indication is closely related to their educational, social and cultural background and is important to be considered for the further legal provision concerning therapeutic abortion.

P76-1184
BREAST LYMPHOMA

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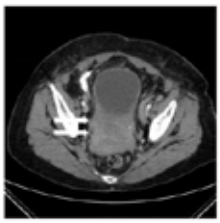
Problem statement: Breast lymphoma suppose the 0,04-1,1% of the breast malignant tumors and the 0,3-2,2% of extranodal lymphomas. Its clinical and radiological non-specificity makes extremely difficult the differential diagnosis with other breast carcinomas. Histopathological study is essential to achieve a diagnosis. Its treatment is based on chemotherapy and radiotherapy and occasionally surgical approach. **Methods:** A case of a patient with breast lymphoma is exposed. A 72 years old woman with antecedents of hypercholesterolemia, arterial hypertension, arthrosis and depression, 2 deliveries, menopause at 55, mother with postmenopausal breast carcinoma. She comes to the consultory for a 1 month evolution right breast tumor, with moderate peritumoral

inflammation. Her general practicioner had started treatment with ciprofloxacin and had asked for a mammography. Simultaneously, she had a light postmenopausal vaginal bleeding and a right inguinal adenopathy. The physical exploration showed a normal left breast and a 6x7cm suspicious, retroareolar tumor in the right breast. Gynecological examination showed a firm and stenotic vaginal area in Douglas, with no other genital anomaly. No axillary or inguinal adenopathies were touched. Mammography showed a right breast retroareolar 8cm tumor, poorly delimited, and an axillary adenopathy with increased cortical thickness (Image 1). Left breast was normal. Because of a high malignant disease suspicion, a biopsy was made, with the result of non-Hodgkin high grade B lymphoma. Axillary punction was negative for malignant process.



Thoracic and abdominal computerized tomography (TC) informed about the suspicious right breast tumor previously described, axillary bilateral adenopathies (hypercaptating in right axilla), and undetermined mediastinal, paratracheal, pretracheal-retrocaval and subcarinal adenopathies. Uterus inferior part and cervix had a size increase, with an increase of volume and density of vaginal area. Urinary bladder posterior wall was thickened, without separation plane with anterior uterine wall, affecting ureteral meatus and causing light ureterohydronephrosis. Multiple pathological adenopathies were seen in iliac territory, inguinal regions, inferior mesenteric area and perirectal space (Image 2). With the diagnosis of non-Hodgkin high grad B lymphoma, medullar biopsy was taken. It did not show lymphoma infiltration. 8 cycles R-CHOP chemotherapy treatment were administrated, followed by local radiotherapy. Then, a PET/TC (positron emission tomography/computerized tomography) showed a residual right breast lesion, metabolically inactive, without nodal disease, in complete metabolic remission. **Results:** A suspicious breast tumor was finally diagnosed of non-Hodgkin B lymphoma in stage 4 with breast and vaginal affectation. Response to chemotherapy treatment was complete. **Conclusion:** A malignant breast tumor not always is a ductal or lobulillar carcinoma. Complete clinical interview and exploration are essential for a correct diagnostic orientation.

P77-1339
INTEGRATION OF NEW SURGICAL APPROACHES IN URINARY STRESS INCONTINENCE AFTER FAILURE OF TRADITIONAL TECHNIQUES

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Objectives: To describe the results in a Pelvic Floor Unit of a Terciary Hospital during 2016, highlighting those recieved after TOT. **Methods:** We did a retrospective study of the patients refered to Pelvic Floor Unit during 2016. We collected the reason for consultation, personal and gineco-obstetrics backgrounds. All of them, did the EPIQ-questionare and a physical exam. After that, a diagnosis was stablished and a treatment was proposed for each patient. In this study, we describe those that present Urinary Stress Incontinence after TOT procedures to perform a personalised surgical treatment. **Results:** In total, we did 52 TOT procedures and 3 complications. The first patient, showed stress incontinence one year after the TOT procedure. During the phisical examination, urethra hipermobility was found. We first proposed a Pelvic Floor rehabilitation, but, without improvement, TVT procedure was done. The surgery was succesful. 8 months later the patient is asymptomatic. The second patient, had 2 surgical operations with TOT procedures. She continued with symptoms after the second procedure. We proposed a Remeex-system. She didn't have uretha hipermobility. The surgery was succesful and currently she is asymptomatic. The third one, had two years before. She continues with urine stress incontinence without uretha hipermobility. We also proposed a Remeex-system. The surgery was succesful and currently she is asymptomatic. **Conclusions:** The choice of the appropiate surgical approach after failure of the initial technique should be individualized. It is always important to differentiate the presence of urethal hipermobility or intrinsic urethral dysfuntion, because in the latter case, the Remeex-System would have a clear indication. The approach of recurrent SUI after TOT procedure is a therapeutic challenge in Soil Pelvix consultation. The incorporation of new surgical techniques is an important advance in the current management.

P78-1529
RETROSTERNAL PAIN AND DYSPNEA IN EARLY PUERPERIUM: A DIAGNOSIS OF PERIPARTUM CARDIOMYOPATHY

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Problem Statement: Peripartum cardiomyopathy (PPCM) is a rare cause of pregnancy-associated heart failure (HF), with a wide geographical variation (for example: 1/4000 in USA, 1/100 in Nigeria). The precise physiopathologic mechanisms still remain unknown, probably being multifactorial. A number of risks factors have been identified: age greater than 30 years, multiple gestation, history of preeclampsia, eclampsia and postpartum hypertension. PPCM is a diagnosis of exclusion, based upon three main criteria: development of HF toward the end of pregnancy or in the months following delivery, absence of another identifiable cause of HF, and left ventricular (LV) systolic dysfunction with an LV ejection fraction (LVEF) generally less than 45 percent. The clinical presentation is variable and usually non-specific: dyspnea, orthopnea and pedal edema are the most frequent. **Methods**: We performed a clinical case retrospective review. **Results:** J.A.S., 29 years old, primipara, caucasian, undergoing a pregnancy without complications until 39 weeks and 3 days, when she was diagnosed with preeclampsia without severe features and was admitted for labour induction. She had a vaginal delivery of a healthy male new-born (weight of 3680 gr, Apgar Index 9/10). In the first day postpartum, the patient described a sudden onset of retrosternal pain associated with dyspnea. Her vital signs were: Blood Pressure 180/100 mmHg, oxygen saturation 92%. Arterial blood gas showed: hypoxemia, hypocapnia and oxygen saturation of 92%. Due to the hypothesis of pulmonary thromboembolism, a computed tomography angiography was performed where cardiomegaly with moderate bilateral pleural effusion was observed with no signs of thromboembolism. Additional investigations were performed, showing a normal electrocardiogram, elevated BNP (259), and a echocardiography with global reduction in LV systolic function (LVEF of 51%), mild left atrial enlargement, mild to moderate mitral regurgitation and asymmetrical apical hypertrophy/trabeculations. The patient was started on supplemental oxygen, antithrombotic therapy and triple antihypertensive medication with furosemide, enalapril and bisoprolol. She was transferred to the intensive care unit for close monitoring for two days. During the hospitalisation, the patient showed clinical improvement by the third day postpartum, and was discharged after four days. Complete recovery ensued at the three-month's follow-up, with normal echocardiography (only mild mitral regurgitation) and Holter monitoring. **Conclusion:** PPCM remains a difficult condition to diagnose and handle, depending on the timing of presentation in relation to labour. The rarity of the condition, overlapping cardiomyopathy aetiologies and unspecific presenting features often result in late diagnosis. It is important as the prognosis is normally favourable. All women with PPCM should receive counselling on the potential risk of recurrence with future pregnancies. The risk is highest among women with persistent LV systolic dysfunction, although women with recovered LV systolic function are also at risk.

P79-1477
MULTIFOLLICULAR OVARY, INSULIN, AND INSULIN RESISTANCE IN WOMEN WITH MENSTRUAL REGULARATY

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Introduction: Find ecosonographic of ovary multifollicular (OMF) in young women with menstrual regularityand without stigmata of

hiprandrogenismo, is not yet a clear explanation, not knowing its connotations in thereproductive function and its relationship with some metabolic parameters as insulin, resistance to insulin and body weight. **Objectives:** Research the relationship that exists in young women, without stigmata of Hyperandrogenism, menstrual regularity and OMF or normal ovaries to study ecosonographic, insulin, insulin and body weightresistance. **Materials and methods:** We studied a group of 76 young women with OMF and menstrual regularity (A) and another 74 women without OMF and menstrual regularity (B). In all we investigated the levels of glucose, and fasting insulin, resistance to insulin (HOMA-IR) and its relation to body weight, discard also hipendrogenemiawith TI (free testosterone) **Results:** The mean age was 23. 8±4. 8 years in Group A and 24. 2±4. 2 in B. The IMC reached 24. 4±2. 8 and 23. 2±4. 3 in them groups to and B respectively, being to 25 in the 44.7% of women of the group to and 33.7% of the Group B (p 0.001). Blood glucose was 89. 9±8. 2 mg/dl to 85. 3±6. 6 mg/dl in groups A and B (p 0.001). HOMA-IR reached 3. 04±1. 4 in Group A and 1. 7±0. 6 in B, (p 0.001), determining group 46% had values of HOMA-IR ≥ 3, while in the B only 4% exceeded this value (p 0.0001). **Conclusion:** These findings are suggestive that in women with OMQ and menstrual regularity, the insulin resistance and hyperinsulinemia would have as an initial deleterious effect on the ovarian function, which translates to greater recruitment follicular with a greater number of antral follicles to the ecosonographic study, ignoring even its further evolution.

P80-1144
PERITONEAL ENDOMETRIOSIS RATE IN WOMEN WITH ABNORMAL IMMUNOHISTOCHEMICAL CHARACTERISTICS OF THE NORMAL ENDOMETRIUM

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Endometriosis is one of the most common and severe diseases of premenopausal women which negatively affects quality of life and fertility. Per the American Association of Reproductive Medicine (ASRM) recommendations, endometriosis is a chronic condition, which requires development of a long-term management plan for patient with maximum use of drug therapy to avoid repeated surgical interventions. The severity of the disease, the ambiguity of approaches and the absence of methods of treatment suitable for all patient population have predetermined interest of many researchers in the comprehensive study of this disease. However, despite numerous publications on this subject, the results remain poorly satisfactory. There are some reports that the eutopic endometrium in patients with endometriosis differs from that in healthy women in structure, proliferative activity, ability to invade (components of the proteolysis and angiogenesis system), state of the steroid receptors expression etc. We studied 60 samples of eutopic (n=30) and heterotopic (n=30) endometrium in women of reproductive age with infertility and laparoscopically confirmed endometriosis. The results were compared with 30 normal endometrial samples from women without endometriosis (also with infertility but with laparoscopically excluded endometriosis). For assessment of endometrial samples immunohistochemical analysis was used. It was found that the eutopic endometrium in patients with peritoneal and ovarian endometriosis had qualitative features comparable to those in the ectopic endometrium. An important difference between eutopic endometrium from patients with and without endometriosis was increase of estrogen receptors expression and decrease of progesterone receptors expression in combination with abundant expression of receptors for MPP-9 and Bs1-2. This allowed us to make conclusion about possible use of this method for early even preclinical diagnosis of endometriosis using only Pipelle-biopsy of endometrium. Later we analyzed the results of laparoscopy in 60 women with infertility, who had abnormal (n=30) and normal (n=30) immunohistochemical characteristics of the eutopic endometrium. Per our data, external genital endometriosis was diagnosed by laparoscopy in 23 patients with abnormal endometrial characteristics (76,7%) what is much more than in patients with normal endometrium – 10 patients (33,3%). This difference was statistically significant (p=0,008). In conclusion, this method after proper evaluation could be promising clinical tool for early detection of mild endometriosis when patients could have maximum benefit from laparoscopic intervention.

P81-1145
SHOULD WE DO MYOMECTOMY IN WOMEN WITH INFERTILITY? A NEW CRITERIA FOR DECISION MAKING

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The role of uterine leiomyoma in women of reproductive age as a factor that influences fertility has been subject of debate for many years. It's importance as a research topic continues to grow as recently more women delay childbirth until later period of their life. It`s well known that submucosal myomas (types 0-2) are clearly associated with infertility and especially pregnancy loss. In case of the presence of such myoma deforming uterine cavity in most of the cases a hysteroscopic myoma resection would be appropriate option before attempts of conception. Association of leiomyoma without deformity of uterine cavity (FIGO type 3) with poor pregnancy prognosis is not so obvious. In this connection, an objective prediction of the potential impact of asymptomatic uterine leiomyoma on fertility and pregnancy outcome is of special importance. Reliable prediction of negative myoma impact on future pregnancy course could help with clinical decision about necessity of surgical intervention in only patients with 'poor prognosis' avoiding invasive procedures in the rest of patients. It was found that the uterine peristalsis (contractility) of non-pregnant uterus can influence female fertility. It is believed that one of the mechanisms of uterine leiomyoma negative impact on fertility can be a change of amplitude and direction of normal uterine contractility in periovulatory period and during the "window of implantation." There's some evidence that myomectomy could improve reproductive function and pregnancy outcomes in patients with abnormal patterns of uterine peristalsis. In our study 32 reproductive age patients with type 3 myoma have been included. In all patients, a computer-based analysis of uterine peristalsis has been performed during ovulation and 'implantation window'. Among this group of patients 23 women were with 'poor prognosis' pattern of contractions and 9 were with 'good prognosis'. After one year of pregnancy planning 5 of 9 of 'good prognosis contractility' got pregnant (55.5%) and only 4 of 23 'poor prognosis contractility' women (17.4%) with statistically significant difference (p=0,01). Furthermore, 14 of 19 patients in "poor prognosis" group decided to perform laparoscopic myomectomy after informed consent was signed. Surgery with standard technique was uneventful in all cases. 3 months' post op the uterine contractility was reevaluated. It has been shown that after myomectomy uterine contractility had become "good prognosis" in 10 of 14 patients (71,4%). Patients could try spontaneous conception after 6 months' post surgery. During 1 year of observation 7 of 10 patients in "good prognosis" peristalsis group after myomectomy (70%) got pregnant and only 1 of 4 patients with "poo prognosis" peristalsis after myomectomy (25%). Investigation of uterine contractility in women with uterine leiomyoma non-deforming uterine cavity (type 3) may be one of the criteria that can be used for decision about whether myomectomy should be performed avoiding unnecessary risks of surgery in women with 'good prognosis peristalsis'. Laparoscopic myomectomy probably can improve fertility in those patients who had infertility associated with "poo prognosis" uterine peristalsis. We need more data to clarify this hypothesis.

P82-1311
EFFECT OF WAIST CIRCUMFERENCE ON LIPID PROFILE, INFLAMMATION AND REDOX STATUS IN HEALTHY POST MENOPAUSAL WOMEN

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Objective: To evaluate the impact of waist circumference (WC) on lipid profile, inflammatory markers and oxidative stress in healthy postmenopausal women. **Study design and methods:** A prospective cross-sectional survey was conducted between December 2013 and June 2015 in Oran (west Algeria). Women with diabetes and high blood pressure, using anti-inflammatory drugs and having thyroid disease were excluded. Of 244 postmenopausal women, only 127 (56.92±6.27 years) healthy subjects were eligible to study. Women were divided into three groups per their WC; GI:

≤80 cm; GII: 81- 88cm; GIII: 88cm. In serum, we analysed lipid profile, CRP and fibrinogen. Pro-oxidant status was assessed by thiobarbituric acid reactive substances (TBARS) and protein carbonyls. Antioxidant defense was performed by analysis of superoxide dismutase (SOD) and catalase (CAT) activities. **Results**: Compared to GI we noted; an increase in TG concentrations (p0.001) in GII and GIII, and a decrease in HDL-C concentrations in GIII (p0.01) and GII (p0.001). CRP concentrations were 2-fold higher in GII (p0.01) and 3.34-fold in GIII (p0.001). Fibrinogen concentrations were increased in GIII (p0.001) and GII (p0.01). TBARS concentrations were increased in GII and GIII (p0.001). Carbonyls concentrations were elevated only in GIII (p0.001). SOD activity was decreased in GII (p0.05) and GIII (p0.001), but catalase activity was decreased only in GIII (p0.01). We found, positive correlation between WC and; TG, HDL-C, LDL-C (r=0.686, p=0.000), TBARS, carbonyls (r=0.640, p=0.000) and CRP, fibrinogen (r=0.537, p=0.000). Inverse relationship between WC and; CAT and SOD activities (r=-0.589, p=0.000). **Conclusion:** In healthy postmenopausal women, high WC was strongly related to inflammation and oxidative stress and can lead to development of cardiometabolic disease.

P83-1425
LIFESTYLE AND BIOMARKERS RELATED TO BODY MASS INDEX IN HEALTHY POSTMENOPAUSAL WOMEN IN WEST ALGERIA

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Aim: To evaluate lifestyle and its relationship with inflammatory markers and oxidative status per body mass index (BMI) among healthy postmenopausal women of west Algeria. **Methods:** 123 healthy postmenopausal women were divided into three groups per their BMI; GI (n = 34; age=61±7 years; BMI =22±1.6 Kg/m^2; GII (n = 45; age=56±6 years; BMI =28± 1.20 Kg/m^2, GIII (n = 44; age=57±6 years; BMI=34.08±2.55 Kg/m^2. The dietary survey was conducted using the 24hour call and recall method over a 3 day. The daily energy expenditure (DEE) was evaluated using the formula of Black et al., (1990). In serum, we analysed lipid profile, CRP and fibrinogen. Pro-oxidant status was assessed by thiobarbituric acid reactive substances (TBARS) and protein carbonyls. Antioxidant defense was performed by analysis of superoxide dismutase (SOD) and catalase (CAT) activities. **Results**: Result: The energy balance (TEI/ DEE) was negative in GI (0.80±0.19) and GIII (0.89±0.19) and balanced in GII (1.06±0.36). The DEE was similar in GI and GII, it was respectively 1897.22±161.49 and 1830.88±205.40 Kcal and was about 2024.64±166.76 Kcal in GIII. Unbalanced dietary intake was noted. Breakfast represented 24% and 21% of total energy intake (TEI). Saturated fatty acids were 28% in GI, 31% in GII, and 37% in GIII of TEI. The consumption of dairy and starchy products was higher in GI compared to GII and GIII. Fibers intake were lower in GII and GIII compared to GI (p0.1). TG concentrations were significantly increased in GII and GIII compared to GI (p0.001). Values of LDL-C were more elevated by +11.5% in GIII (p0.001) than GII. HDL-C decreased in GII (p0.05) and GIII (p0.001) than GI. CRP concentrations were 2.8-fold higher in GII and 4-fold higher in GIII compared to GI (p0.001). Fibrinogen values were 1.6-fold more elevated in GII and 1.35-fold in GIII (p0.001) compared to GI. TBARS concentrations were 2.48-fold increased in GII and 2.38-fold in GIII than GI (p0.001). Compared to GI (p0.001), carbonyls concentrations were increased by 43% in GII and by 81.6% in GIII. SOD activity was decreased significantly (p0.001) by -44% in GII and by -45% in GIII compared to GI. CAT activity was decreased significantly in GII (-10.41%; p0.001) and GIII (-4.42%; p0.001) compared to GI.
Conclusion: Postmenopausal women have a bad lifestyle associated with dyslipidemia inflammation and oxidative stress. Nutritional education and regular physical activity were essential for the prevention of overweight and cardiovascular diseases in women.

P84 - 1139
USE OF PRP (PLATELET RICH PLASMA) WITH PLATELET DEGRANULATION IN TREATMENT OF INFERTILITY

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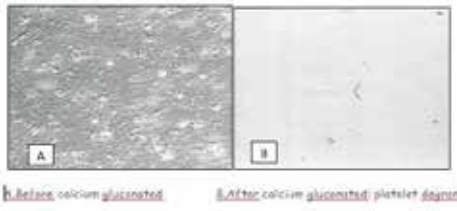
Introduction: PRP is a new promising regenerative therapeutic application which can offer therapeutic benefits without detrimental side effects as it is a direct product of own blood sample. PRP has been employed in several fields of medicine: from plastic surgery, maxillo-facial surgery, dental surgery, orthopedics, eye surgery and gynecology. PRP is highly rich in several growth factors that have a significant role in tissue regeneration. The main ones include epidermal growth factor, vascular endothelial growth factor, transforming growth factor beta 1 and beta 2, interleukin 10, several classes of platelet-derived growth factors, insulin like growth factor and hepatocyte growth factor. More recently, clinical trials have provided substantial amount of evidence that PRP can have many beneficial effects in the field of infertility through its regenerative effects. PRP applications have been demonstrated to have cell proliferative effects as well as anti-inflammatory effects while working on tissue repair. PRP application has also been associated with increased progesterone receptor activity. Progesterone receptors are the main actors that help maintain a thick and healthy endometrial lining, which in turn, helps with embryo implantation. **Methods:** We have started offering PRP applications for 10 patients with: recurrent implantation and IVF failures and patients who cannot obtain a desired level of endometrial thickness for a successful embryo transfer. The endometrial PRP application is administered approximately in 10 days of menstrual cycle and 48 h before embryo transfer. PRP was prepared from autologous blood. On around 10 day of menstrual cycle 8 ml of venous blood was drown from the syringe pre-filled with anticoagulant solution and centrifuged immediately at 1200g for 12 min. The blood was divided in three layers: red blood cells at the bottom, cellular plasma in the supernatant and a coat layer between them. The plasma layer and buffy coat were collected to another tube and re-centrifuged at 3300g for 7 min. The resultant pellet of platelets was mixed with 2 ml of supernatants and 100 ml of calcium gluconated was added. After 5-6 min, there it was happened the formation of a clot obtaining platelet degranulation. The clot has been removed, so 2 ml of PRP was obtained. The PRP was subsequently infused on the endometrium after controlling platelet degranulation at microscope.



Results: After application of PRP, the endometrial thickness was satisfactory in all the patients (8 mm), with endometrial three-layer pattern, before progesterone administration and embryo transfer was performed; of these patients with previous IVF failures, despite good quality embryos, beta-HCG was positive in 6 of them: the pregnancy is progressing normally in 4 women, one had an early miscarriage at 9 weeks' pregnancy and 1 with biochemical abortion. **Conclusion:** We can suppose that multiple implantation failures were caused by inefficient expression adhesion molecules and insufficient endometrial thickness which can hypothetically be more represented after PRP application; so, this application, in our lab, has replaced common treatments to obtain a desired level of endometrial thickness that are extended estrogen administration, vaginal sildenafil citrate and LPS with triptorelin injection, because anyone of these have proved effective.

P85-1140
UTERINE NATURAL KILLER CELLS IN PROLIFERATIVE ENDOMETRIUM OF INFERTILE WOMEN

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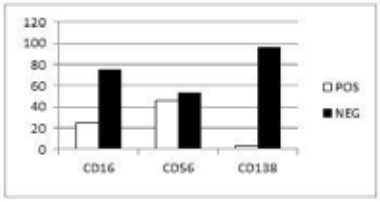
Introduction: Embryo implantation is influenced by local and systemic immune responses involving immunoglobulins, cytokines, hormonal and other endometrial factors. A synergism of these factors is critical for successful implantation and subsequent conception. Natural killer (NK) cells have been implicated to play a role in female reproductive performance. They have been thought to be associated with implantation failures, recurrent miscarriage or infertility due to either NK cell cytotoxicity or receptor/gene expression. NK cells cause cytotoxic effects by inducing lysis or apoptosis of the target cells mediated by the release of granular components within their cytoplasm or secretion of cytokines, such as tumor necrosis factor-alpha, interleukin 10, interferon –gamma and transforming growth factor –beta. The human endometrium contains a substantial population of NK cells which vary in number and in proportion to the total number of endometrial stromal cells during the

menstrual cycle. NK cells increase in number substantially in the mid-secretory phase and are the major endometrial lymphocyte population in the late secretory phase and the first trimester of pregnancy. Uterine NK cells are CD56, CD16 and CD138+ for the diagnosis of endometritis. The regulation of uterine natural killer (NK) cells has been associated with reproductive conditions including recurrent pregnancy loss (RPL) and implantation failure. It is speculated that in women an elevation of natural killer (NK) cells may influence reproductive performance. Women who have fertility problems, specifically miscarriage or unsuccessful IVF are more likely to have higher levels of activity of these `Natural Killer cells` than other women. The aim of our study was to analyze NK cell concentration in the proliferative endometrium (before ovulation around day 10) of infertile patients and NK cell levels in endometrium are currently being used as a diagnostic test to guide the initiation of therapies in patients with infertility. **Methods**: This study was conducted with 63 patients with unexplained infertility. Proliferative endometrial tissue samples were obtained with a Pipelle catheter, and the endometrial CD 16, CD 56 and CD138+ were determined. **Results**: Immunologic analyses are increasingly implemented in infertility diagnostics. One of the parameters of interest are uterine NK cells. Our study reveals presence of CD16 CD56 and CD138 in the proliferative endometrial tissue of infertile women. It was considered positive cases presence of several cells of CD 10 cells.



Conclusions: CD16 and CD56 cell abundance in the proliferative endometrial tissue of women with reproductive failure has suggested they may play a role in this pathogenesis. Common treatment for women with abnormal endometrial NK cells numbers is use of corticosteroids but it has not shown an efficacy. For this reason, in our lab we use a biophotonic therapy: as described in our previous study, through a special device connected to the computer, the woman received the spermatic biophotonic emission of her male partner, previously stored. The administration of spermatic biophotonic energy was carried out a few minutes before the intratubal insemination in acupuncture points and at pelvic and vaginal level, and on culture medium in which there are incubated embryos obtained through ICSI et/or PICSI. The pregnancy rate was significantly higher in this group of patients.

P86-1143
PUERPERAL CHRONIC UTERINE INVERSION: A CASE REPORT

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Uterine inversion is a rare condition that involves the prolapsing of the uterus through the cervix, commonly from complications of labor. This is a case of a 27-year-old, who delivered vaginally at home three years prior to consult, and presented with chronic abnormal uterine bleeding. The initial diagnosis was a cervical myoma, but ultrasound showed inversion of the uterus. The patient was managed with Haultain's procedure. This case highlights the difference of acute versus chronic uterine inversion in terms of pathophysiology and management, as well as the dilemmas that include future pregnancies and appropriate contraception.

P87-1327
SELENIUM SUPPLEMENTATION AND GESTATIONAL DIABETES

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Selenium is known to exert multiple beneficial effects including anti-inflammatory wbr /actions. The aim of the study was to evaluate the effects of selenium supplementation on gene expression levels of inflammatory cytokines and vascular endothelial growth factor (VEGF) in women with gestational diabetes (GDM). This randomized double-blind, placebo-controlled trial was carried out among 40 subjects diagnosed with GDM aged 18-40 years old. Subjects were randomly allocated into two groups to receive either 200 μg/day selenium supplements (*n*=20) or placebo (*n*=20) for 6 weeks. Gene expression of inflammatory cytokines and VEGF were assessed in lymphocytes of GDM women with RT-PCR method. Results of RT-PCR indicated that after the 6-week intervention, compared with the placebo, seleniumsupplementation downregulated gene expression of tumor necrosis factor alpha (TNF-α) (*P*=0.02) and transformwbr /ing growth factor beta (TGF-β) (*P*=0.01), and upregulated gene expression of vascular endothelial growth factor (VEGF) (*P*=0.03) in lymphocytes of patwbr /ients with GDM. There was no statistically significant change following supplementation with selenium on gene expression of interleukin (IL)-1β and IL-8 in lymphocytewbr /s of subjects with GDM. Seleniumsupplementation for 6 weeks in women with GDM significantly decreased gene expression of TNF-α and TGF-β, and significantly increased gene expression of VEGF, but did not affect gene expression of IL-1β and IL-8.

P88-1510
OUTCOMES AFTER SACRAL COLPOPEXY WITH NON-ABSORBABLE PERMANENT POLYPROPYLEN MESH – 5 YEARS EXPERIENCE

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Problem statement: Sacral colpopexy is a reconstructive surgical technique intended to repair pelvic organ prolapse. It is associated with lower risk of awareness of prolapse, repeat surgery for prolapse, postoperative urinary stress incontinence (USI) and dyspareunia than a variety of vaginal interventions. Meshes currently available and used are lighter than those previously used but lack evidence of safety. We describe our experience with laparotomic and laparoscopic sacral colpopexy, including both *naïve* and post-hysterectomyzed women. **Methods:** Retrospective, descriptive study which included all 58 women who underwent a sacral colpopexy in a public Portuguese Hospital (Hospital Beatriz Ângelo) since its opening in 2012 until 2016. Our procedure included the use of non-absorbable permanent polypropylen mesh. Clinical records were analyzed and ethnicity, age, weight, active sexual life and past deliveries and its characteristics were evaluated. Medical history such as chronic hypertension and diabetes mellitus were investigated as well as type of surgery. Abdominal approach was compared to laparoscopic attending to operative time, average hospitalization time, intraoperative (anesthetic, bleeding and organ lesion), and pos operative complications (relapse of symptomatic relapsee, *de novo* USI, mesh extrusion, constipation, dyspareunia/pelvic pain and wound infection/dehiscence). Significance was set at P0.05 **Results:** 58 women were included - 22 underwent abdominal approach (subgroup1, S1) and 36 laparoscopic approach (subgroup2, S2). Conversion to laparotomic occured in 5 laparoscopic sacral colpopexy; 2 of them because of anesthesic complications and the other 3 for difficulty in anatomic structures identification/another organ lesion. **The typical woman who underwent sacral colpopexy in our hospital was a caucasian, overweighted, 57-year-old women with active sexual life (similar in S1/S2). All women had at least one vaginal delivery, 15% had 3 or more deliveries, 17% had operative vaginal deliveries and 19% had newborns weighting more than 4000g. Around one-third had chronic hypertension. The typical woman who underwent sacral colpopexy in our hospital was a caucasian, overweighted, 57-year-old women with active sexual life (similar in S1/S2). All women had at least one vaginal delivery, 15% had 3 or more deliveries, 17% had operative vaginal deliveries and 19% had newborns weighting more than 4000g. Around one-third had chronic hypertension.** Two-thirds (in both subgroups) underwent hysterectomy in the same procedure, the other third consisted of vaginal vault prolapse. USI surgery was associated in 9%/8% (S1/S2) and 50%/31% (S1/S2) underwent vaginal repair. S1 showed shorter operative times (in average 53 minutes less) but longer hospitalization times (6 hours more). Follow up was between 2months and 4years (average 2years). Overall, relapse of symptomatic prolapse occurred in 14% of the cases, significantly higher in laparotomic (8/58; S1 6/22 and S2 2/36). Only 7% (4/58; S1 3/22 and S2 1/36) justified a new surgery. Among other complications, one assymptomatic mesh

extrusion occurred (laparoscopic), constipation affected 14% of women (8/58; S1 3/22 and S2 5/36) and dyspareunia/pelvic pain 7% of women (4/58; S1 1/22 and S2 3/36). *De novo* USI affected 17% of women (10/58; S1 2/22 and S2 8/36). No statistical differences were verified considering intra/posoperative complications between subgroups. **Conclusion:** Permanent mesh appears to be a safe and effective treatment of pelvic organ prolapse regardless of abdominal or laparoscopic approach. Patient satisfaction is achieved with both approaches, with similar complications except for relapse of symptomatic prolapse, higher in laparotomic. Other main complications described are *de novo* USI, constipation and dyspareunia/pelvic pain, which is in accordance with the literature.

P89-1532
GESTATIONAL BREAST CANCER – MISCELLANEOUS PRESENTATIONS WITH CONSISTENT POOR OUTCOMES

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Problem statement: Gestational breast cancer is defined as breast cancer diagnosed during pregnancy, first postpartum year and, for some authors, any time during lactation. Although it is one of the most common cancers in pregnant women, it is still an uncommon event, according to different series, affecting 15-35/100 000 deliveries. **Methods:** descriptive study with analysis and comparision of the three cases diagnosed and surveilled in the last two years, in a Portuguese Public hospital, Hospital Beatriz Ângelo (having around 2500 deliveries/year). **Results:** Case 1 (C1) consisted of a unilateral *de novo* mass, initially identified 5 months after delivery in breastfeeding women. It was first diagnosed as a puerperal mastitis, with subsequent evolution to breast abscess. Breast cancer hypothesis was set considering presentation refractory to antibiotic treatment. Case 2 (C2) was diagnosed during pregnancy after palpation of a painless 5cm-mass at 30 weeks of gestation (WG). After first appointment at 36WG, two weeks were needed for diagnosis and determination of induction of delivery. Case 3 (C3) refers to a woman with a previously known breast nodule, studied before pregnancy and considered non-suspicious. Quick enlargement during pregnancy was an alert sign; however, referal occured when persistence after delivery was observed. C1 had no family history of breast cancer; C2 had a mastectomized grandmother (malignancy unknown) and C3 had several second/third-degree relatives with breast cancer. C1 and C2 had expression of no/low hormonal receptors; C3 had 90%-positive estrogen receptors and progesterone receptors. All 3 cases were infiltrating carcinomas with indication for mastectomy; in C1 and C2 after neoadjuvant chemotherapy. **Conclusions:** By reviewing these three consecutive cases of this rare event, we pretend to demonstrate that there are several possible presentations, affecting women either during or after pregnancy. All cases were diagnosed at an advanced stage, similarly to most cases reported in literature. We conclude by strengthening the need of a high index of suspicion for cancer in any breast mass in pregnancy or puerperium. This is particularly important considering frequent delays in diagnosis, poor outcomes and how young affected women are.

P90-1543
MANAGEMENT INCOMPATIBILITY IN A PREGNANT WOMAN WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Systemic Lupus Erythematosus (SLE) is an auto immune disease which is characterized by the production of antibodies towards the nucleus of the cell. Pregnancy in a woman with SLE is associated with an increase rate of adverse maternal and fetal outcome. The frequency of pregnancy lost on SLE in general US population is 43% in 1960-1965 and dropped to 17% in 2000-2003. Today, approximately 4500 pregnancies are woman with SLE in USA each year. Among 29 observational studies with 2751 pregnancies, the rate of spontaneous abortion is 16%, and intrauterine growth restriction (IUGR) 12,7% (1). In Indonesia, Dr Soetomo Hospital Surabaya reported 166-women patient with SLE in a year (Mei 2003-April 2004). Every 2000 pregnancies, there are 1 - 2 cases with SLE. (2). A 25 years old woman, with 4 weeks of pregnancy, diagnosed with SLE since 2003. She also has lupus nephritis. Routinely, she used to check her condition to internal polyclinic and get medicine regularly. She came to the emergency room because she had fluksus. She has been told that her baby is already dead (IUFD). Her medicine are metil prednisolone, lansoprazole, folacic acid, and sandimun. Laboratorium findings show hemoglobin 5,2 gr/dl, platelet 146.000, albumin 1,56, and increase of APTT. She was planned to have some blood and albumin transfusions. One day after she entered the hospital, she had miscarriage, but placenta still in the uterine. The problem now is the hemoglobin only 3,7 gram/dl. The plan to give blood transfusion still postpone because the cross test at the blood bank show incompatibility with 40 bags of donor blood. We decided to give 1 bag of washed erythrocyte transfusion with threshold major cross match 3. After that, the hemoglobin rises to 6.3. There was no complication on her. The next day we decided to add one more bag of washed erythrocyte. The placenta came out spontaneously. There was no valid data for this patient about her medical treatment for SLE. If her pregnancy happened while SLE still not remission, her risk probability for dead fetus is 50-75% (2). Risk of eksaserbation for her 4 weeks pregnancy (trimester I) is about 13% (2). IUFD can be caused by her disease or by the drugs that she got to reduce SLE's flare. The anemia condition needs transfusion, but the incompatibility is the additional problem for this patient. IVIG is very ekspensive in our place, that is why IVIV infused 24 h of transfusion can not be done (3). Despite the continuing controversy, IVIG administration is proposed as an immunosuppressive therapy for so-called alloimmune-mediated recurrent miscarriage because of the observation that it contains antibodies that block antibody-mediated immune damage (4). Transfusion using the lowest agglutination level (3), also make the patient into risk condition (5). She could have hemolysis mild until severe because of this transfusion. It is a blessing this patient can except the incompatibility blood without any side effect. Kooperation from all the patient's family is very helpful.

References:

Stojan G., Baer Alan N. Flares of systemic lupus erythematosus during pregnancy and the puerperium: prevention, diagnosis, and management. In: expert review of clinical immunology, 8:5, 2012

Kusuma AANJ. Lupus Eritematosus sistemik pada kehamilan. In: Jurnal penyakit dalam volume 8. 2007.

Kohan AI, et al., High-Dose Intravenous Immunoglobulin in Non-ABO Transfusion Incompatibility. Vox Sang 1994; 67:195-198.

Branch DW, et al., Obstetric uses of intravenous immunoglobulin: Successes, failure, and promises, in: J. Allergy Clin Immunol Volume 108, number 4.

Guidelines for compatibility procedures in blood transfusion laboratories, Transfusion Medicine, 2004, 14, 59-73.

P91-1206
ANTRAL FOLLICLE COUNT QUARTILE IS AN INDEPENDENT PREDICTOR OF ONGOING PREGNANCY IN SUB-OPTIMAL RESPONDERS

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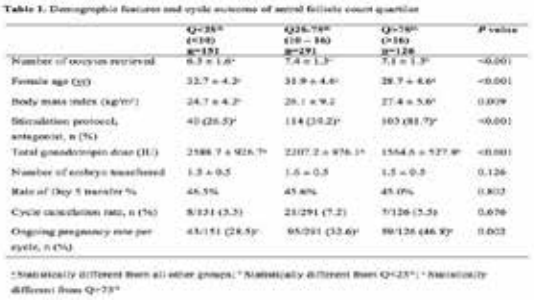
Objective: Sub-optimal response (SOR) is referred to as retrieval of 4-9 oocytes. However, 4-9 oocytes might be retrieved with from patients with different baseline ovarian reserve. Since there is paucity of data we aimed to assess the impact of baseline ovarian reserve on ICSI outcome in patients with SOR. **Methods:** Retrospective cohort study. Inclusion criteria were: female age 7 and chronologically the first cycle. Exclusion criteria were: azoospermia and pre-implantation genetic testing cycles. Ongoing pregnancy (OP; 12 week of gestation) was taken as the primary outcome measure. A total of 568 consecutive couples undergoing ICSI cycle during Jan 2014 - Jan 2017 were enrolled. GnRHagonist and GnRH-antagonist cycles were included; the starting dose of rec-FSH was 100-300 IU/day and adjusted per the ovarian response. Quartiles of baseline antral follicle count (AFC) were formed; Q25th (10), Q25-75th (10-16), and Q75th (16). Logistic regression analysis was performed to delineate the independent significant predictors of OP. **Results:** The Q75th arm was significantly younger and had higher body mass index (BMI) compared to the Q25th and Q25-75th arms (Table 1). Although three groups fulfilled the definition of SOR, the mean number of oocytes was significantly less in the Q25th arm. The total gonadotropin dose was significantly different in all three arms. Cycle cancellation rates and the mean number of embryos transferred were similar. However, there was a significant increase in OP per cycle with increasing AFC quartiles. When female age, BMI, indication of IVF, AFC quartile, ovarian stimulation protocol, number of retrieved oocytes, day 3/5 transfer, and number of transferred embryos were entered the logistic regression model, only female age, AFC quartile, Day3/5 transfer and number of embryos transferred remained to be the significant predictors of OP. When Q75th was taken as the reference, the OR (95% CI) for Q25th and Q25-75th were 0.5 (0.3-0.9; p=0.029) and 0.6 (0.4-0.9; p=0.040),

respectively.
Conclusions: In sub-optimal responders, ovarian reserve, as assessed by AFC quartile, is an independant predictor of OP in fresh embryo transfer cycles. Increasing AFC is associated with significantly higher OP per started cycle in SOR patients, despite the transfer of comparable Day 3/5 transfer rate and number of embryos transferred. However, the impact of AFC quartile on cumulative pregnancy rates should be further studied.



P92-1519
THE LEVEL OF CYTOKINES IN THE PERITONEAL FLUID IN WOMEN WITH EXTERNAL GENITAL ENDOMETRIOSIS

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Endometriosis is one of the most frequent gynecological diseases of women of reproductive age, which is accompanied by an inflammatory reaction. Particular attention is paid to the study of the role of peritoneal fluid in the development of endometriosis, since it is this medium that directly contacts endometrioid heterotopia. **The aim of the study** was to examine the pro-IL-2, IL-6, IL-8, TNFα content and anti-inflammatory (IL-4, IL-10) cytokines in a peritoneal fluid to clarify the inflammatory process in external genital endometriosis (EGE). 38 women with EGE were examined. 29.2% of patients had grade I endometriosis, 54.2% had grade II and 16.6% had grade II-III.14 women who sought diagnostic laparoscopy for pregnancy planning without signs of endometriosis were control group. The diagnosis of EGE is established on the basis of endoscopic data and the results of histological examination. The severity of EGE was estimated by classification. The peritoneal fluid was collected during laparoscopic operations. The level of cytokines was determined by the ELISA method using the "cytokine" test systems (SPb, Russia). All women presented typical for genital endometriosis complaints of dysmenorrhea and pelvic pain. Studies have shown that the level of IL-6 in the peritoneal fluid of patients with EGE was higher than in the control group (20.4 ± 1.2 pg / ml versus 11.6 ± 1.05 pg / ml in the control) and was higher with EGE I-II degree of severity in comparison with EGE III-IV severity (23,8 ± 1,1 pg / ml). The content of IL-10 in the peritoneal fluid was higher at grade III-IV than in the I-II severity level and in the control group. The level of IL-4 and IL-8 in the peritoneal fluid in patients with EGE was higher than in the control group and correlated with the severity of the disease. And the levels of IL-2 and TNFα in the peritoneal fluid in EGE patients were sharply reduced. The obtained data testify to the unquestionable participation in the development and progression of EGE cytokines, both pro-inflammatory and anti-inflammatory, that ensure the invasion of endometrial cells, the growth of endometriotic foci, the formation of a microcirculatory bed, the induction of inflammation. Consequently, the immunological changes in the peritoneal fluid are due to the already formed foci of endometriosis.

P93-1520
CHANGES IN THE STATE OF THE IMMUNE SYSTEM IN WOMEN WITH CERVICAL INTRAEPITELIAL NEOPLASIA

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The cervical cancer is the second most common cancer in women. The most alarming are the data on the increase in the incidence among young women. With tumor growth, the nature of interactions in the system "immunocompetent cells, cytokines" changes, which underlies the violation of the mechanisms of antitumor protection. **The aim of the study** was to study the content of some subpopulations of lymphocytes in women with CIN. We examined 32 women aged 21 to 40 years with CIN of varying degrees, living in the Aral region. The control group consisted of 18 practically healthy women of the same age. Clinical and laboratory data were studied: clinical, colposcopic, cytological and immunological methods of pathology detection. The quantitative content of lymphocytes with the CD3, CD4, CD8, CD16, CD20 phenotype was studied using monoclonal antibodies of the LT series (Institute of Immunology, Sorbent LLP, Moscow, Russia). From an anamnesis it is established, that inflammatory diseases of genitals suffered more than half of women. Cervical erosions were in anamnesis in 63.6% of patients, and in 45.4% patients showed endometritis. It was revealed that among all diseases of the cervix, 31.8% accounted for ectopy with different causes. In different age groups, ectopy and pathology of the cervix met with approximately the same frequency. Immunological studies have shown that the total pool of T lymphocytes in patients with CIN was significantly lower (P 0.01), the CD4 + lymphocyte count was 1.17 lower than the control values, and the number of CD8 + cells was 1.3 times higher than in women of the control group (P 0.01). The level of lymphocytes with the marker CD20 was significantly increased in comparison with the control group (P 0.05). Activation of CD25 + cells was observed in women with CIN (P 0.01). The increase in the number of lymphocytes carrying a receptor for IL-2 (CD25 +) and the level of IL-2 secretion in patients with CIN should be considered as an adaptation response from the body to the course of the disease. A significant decrease in the CD95 + lymphocyte content was found in women with CIN, in contrast to the parameters of women in the control group (P 0.01). The results of the study showed the presence of changes in the state of immunity in women with CIN. It can be assumed that the features of the functioning of the immune system can play a significant role in providing a predisposition or resistance to malignant neoplasms. It is known that 57% of CIN I spontaneously regress, 32% persist in the form of CIN I for a long time, 11% progress in CIN II, CIN III, and only 0.5% in invasive carcinoma. In contrast to mild dysplasia, CIN III turns into invasive cancer in 12% of cases for 2 years, and rarely regresses.

P94-1176
DETECTION OF LACTATE AND OTHER METABOLITES IN OVARIAN TUMOURS USING 1H NMR SPECTROSCOPY

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A new biomarker is needed to assess treatment response in ovarian tumours. Lactate concentration is a good indicator of tumour malignancy, which can be identified using MR spectroscopy. **Aims:** To observe lactate and other metabolites in ovarian tumours and find a robust method for lipid suppression. **Methods:** Metabolic profiles of tumours were observed by single voxel (PRESS) and multivoxel (CSI) 1H MRS in subcutaneous A2780 xenograft tumours in mice. Phantom measurements were used to optimise the technique. Muscle was selected as reference tissue and an ex vivo lactate assay was performed. An inversion recovery (IR) pulse was evaluated for lipid suppression. **Results:** A negative peak at 1.4ppm, consistent with lactate, was found using PRESS with TE1=128 ms in tumour models. Choline and glycine were also detected. Lactate concentrations (7-15 mM) were confirmed by ex vivo analysis. Using an IR pulse compromised water suppression. **Discussions:** The negative peak chemical shift, suggested it could originate from alanine (1.45ppm) rather than lactate (1.33ppm). Ex vivo analysis showed that relative lactate content of the tumours (n=3) was like that observed by in vivo MRS. In one tumour, lactate contaminated with lipid was observed. Lactate could not be reliably identified in CSI due to inconsistent phasing and lipid contamination. **Conclusion:** The choice of radio-frequency coil, pulse sequence, and echo time were optimised but an IR pulse was not helpful in detecting lactate. Applying PRESS to ovarian tumours and skeletal muscle showed distinct metabolite patterns where signal consistent with lactate or alanine could be identified.

P95-1241
EFFECTS OF FAST BEAT MUSIC ON ACTIVE LABOR: A RANDOMIZED CONTROLLED TRIAL

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Problem statement: This randomized controlled trial was conducted to evaluate whether use of fast beat music could reduce the pain and

duration of labor. **Methods:** Between 2015 and 2016, a total of 140 women at 37 weeks or greater with spontaneous labor were randomized to music and control groups. Labor pain was assessed on a Visual Analogue Scale at the beginning of active labor and then everyone hour. Duration of active phase and second stage of labor, mode of delivery, fetal and maternal outcomes and Apgar scores were recorded. The trial is registered at irct.ir, number IRCT201306108151N5. **Results:** One-hundred and forty women were randomized and 125 women completed the study procedure. Age, parity, BMI and gestational age were similar in both groups. Mothers in the music group had significantly lower VAS scores at all time intervals than those in the control group. There was not statistically significant difference between the mean time of active phase and second stage of labor in two groups. **Conclusion:** Per this study, listening to fast beat music during active labor decreased the mother's pain.

P96-1549
PRIMARY DEBULKING SURGERY VERSUS PRIMARY NEOADJUVANT CHEMOTHERAPY FOR HIGH GRADE ADVANCED STAGE OVARIAN CANCER: COMPARISON OF SURVIVALS

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Problem statement: Aim of the study was to analyze the overall-survival (OS) and progression-free-survival (PFS) of patients affected by high grade and advanced stage epithelial-ovarian-cancer (EOC) with at least 60 months of follow-up treated in a single gynecologic oncology institute. We compared PDS (primary debulking surgery) versus neoadjuvant-chemotherapy plus interval debulking surgery (NACT + IDS) stratifying data based on residual disease with the intent to identify the rationale for therapeutic decision-making. **Methods**: Observational retrospective study on consecutive patients with diagnosis of high grade and FIGO stage III/IV EOC referred to our center between January 2008 - May 2012. We selected only patients with a follow-up of at least 60 months. Primary endpoint was to compare PDS versus NACT+IDS in term of PFS and OS. Secondary endpoint was PFS and OS stratifying data according to residual disease (RD) after surgery in patients receiving PDS versus NACT+IDS. Finally, through Cox hazards models, we tested the prognostic value of different variables (patient age at diagnosis, RD after debulking, ASA stage, number of adjuvant-chemotherapy cycles) for predicting OS. **Results:** A total number of 157 patients were included in data analysis. Comparing PDS arm (108 patients) and NACT+IDS arm (49 patients) we found no significant differences in term of OS (41,3 versus 34,5 months, respectively) and PFS (17,3 versus 18,3 months, respectively). According to RD we found no significant differences in term of OS between NACT+IDS patients with RD=0 and PDS patients with RD=0 or RD=1, as well as no significant differences in PFS were found comparing NACT+IDS patients with RD=0 and PDS patients with RD=0; contrarily, median PFS resulted significantly lower in PDS patients receiving optimal debulking (R=1) in comparison to NACT + IDS patients receiving complete debulking (R=1). PDS arm was affected by a significant higher rate of severe post-operative complications (grade 3 and 4). Diagnostic laparoscopy before surgery resulted significantly associated with complete debulking. **Conclusions:** We confirm previous findings concerning the non-superiority of NACT+IDS compared to PDS for the treatment of EOC, even if NACT + IDS treatment was associated with significant lower rate of post-operative complications. To maximize patient's survival and ensure good quality of life it is mandatory to identify the most effective treatment based on pre-operative conditions and on potential resectability. At this regard, laparoscopic primary assessment of tumor extension represents a valuable strategy for the decision making of primary or interval debulking surgery.

P97-1271
CONIZATION IN THE FERTILITY-SPARING TREATMENT OF EARLY INVASIVE CERVICAL CANCER

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Problem statement: Radical trachelectomy is standard fertility-sparing treatment for stage 1 invasive cervical cancer. Oncologic outcome is enough, but sometimes complications, lower urinary dysfunction, sterility and preterm delivery were observed. Incidence of parametrial invasion is very low in small size (2cm) early invasive cancer. Among low-risk patients who underwent radical trachelectomy after conization, only small number of patients had residual disease. Recently more conservative surgery, such as simple trachelectomy or conization with pelvic lymphadenectomy had been explored. **Methods:** We retrospectively identified nine patients with early-stage (1A1-1b1) cervical cancer who underwent conization for fertility sparing treatment from 2010 to 2016. Clinical, pathological and maternal information was collected. **Results:** The median age of patients was 34 years (range, 28-40 years). Preoperative MRI and CT were examined in all patients. Stage distribution included 1 patient with 1A1 cervical cancer with lymphovascular space invasion (LVSI) and 1 stage 1A2 and 7 microscopic 1B1 (3 had LVSI). Histologic diagnosis included 6 patients with squamous cell carcinoma and 3 with adenocarcinoma. All patients underwent conization, 4 (44%) of them additional laparoscopic pelvic lymphnode biopsy using sentinel node identification. No lymphnode metastasis was found. 2 patients received adjuvant Pt+Taxan based chemotherapy because of positive LVSI. No recurrences were observed after a median follow-up time of 28 months (rage, 8-65 months) Four Patients tried to conceive. 3 of them became pregnant without ART (assisted reproductive technology), two had term deliveries (40w/3426g, 38w/2842g), one first-trimester miscarriage. **Conclusion:** Patients underwent conization with or without lymphnode biopsy had good reproductive and maternal outcome. In carefully selected patients, this fertility-sparing treatment is possible safe and feasible procedure.

P98-1217
FALLOPIAN TUBE PROLAPSE AFTER ABDOMINAL HYSTERECTOMY: A RARE CAUSE OF CHRONIC PELVIC PAIN

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Problem statement: Hysterectomy is the most common major surgery performed in Gynecology. A rare complication of this procedure, with few cases reported in the literature, is fallopian tube prolapse, which is thought to occur in only 0,1% of all hysterectomies, more often after vaginal hysterectomy than laparotomy. Common symptoms are chronic pelvic pain, dyspareunia and copious watery vaginal discharge. Final diagnosis is carried out by histopathologic characterization. Surgical treatment is required. Since there is little awareness for this condition, tubal prolapse in usually misdiagnosed as granulation tissue at the vaginal cuff, therefore, delaying optimal treatment and prolonging patient's discomfort. **Methods:** Retrospective study of a clinical case from our center, Hospital do Divino Espírito Santo de Ponta Delgada, and review of the literature. **Results:** A 34-year-old multiparous woman, smoker, was referred to our center for Low-grade Squamous Intraepithelial Lesion (LSIL), in 2011. After satisfactory colposcopy, guided biopsy was performed, which revealed Cervical Intraepithelial Neoplasia (CIN) 3. She underwent conization two times (2011 and 2014) for recurrence of the disease. In 2016, because of lesion persistence, a hysterectomy was performed. Surgery went as expected and postoperative recovery was uneventful. Patient was discharged after 48h, with no immediate complications. After 2 months, the patient started complaining of severe pelvic pain, nausea and urine incontinence, which led to multiple visits to the emergency department. Laboratory workup and pelvic ultrasound revealed no abnormal results. No vesico-vaginal fistula was found by Urology. However, during gynecological examination, a profuse watery and bloody vaginal discharge, foul-smelling, mimicking urine leakage was found. Speculum examination also revealed a polypoidal, erythematous and strawberry colored growth with 2 x 2 cm, pending from the vaginal cuff, which looked like the fimbrial end of the fallopian tube. Pelvic pain was reproduced by traction of the polypoidal growth and vaginal palpation. An exploratory laparotomy was performed on May 2017. During surgery, right fallopian tube was found to be "imprisoned" in the vaginal cuff. Total salpingectomy and vaginal closure were performed, without incidents. Histopathologic characterization revealed usual fallopian tube histology, with chronic inflammation and necrosis *foci,* which confirmed the diagnosis. At follow-up, patient was asymptomatic and the vaginal cuff was scarred. **Conclusion:** Fallopian tube prolapse after abdominal hysterectomy is uncommon but gynecologists should be aware of this possible complication because it affects greatly women's quality of life, including daily and sexual life. Definitive treatment is achieved by total salpingectomy, and the approach (vaginal, laparotomy or

laparoscopy) should be decided case-by-case and depending on the surgeon's experience. After surgical treatment, most patients become asymptomatic and usually no recurrence is reported.

P99-1153
PERI-IMPLANTATION HEPARIN THERAPY IN INFERTILITY WOMEN WITH REDUCED SUBENDOMETRIAL BLOOD FLOW UNDERGOING INTRAUTERINE INSEMINATION

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Problem statement: Angiogenesis and uterine blood supply are essential for endometrial growth and implantation. Thrombophilia such as antiphospholipid antibody, factor V Leiden mutation, prothrombin G20210A mutation, protein S deficiency, protein C deficiency, and antithrombin III deficiency, is often suspected as a possible cause of recurrent miscarriage and implantation failure after IVF. Endometrial blood flow has been investigated for predicting the pregnancy outcome, and poor endometrial blood flow could be related with poor IVF outcomes. It has been suggested heparin given in the periimplantation period may improve clinical outcomes in women undergoing ART, however, the efficacy of heparin is still controversal. The aim of this study was to evaluate the efficacy of heparin during intrauterine insemination cycles in the infertility women with reduced subendometrial blood flow and analyzed by presence of thrombophilia. **Methods:** Thirty-two women with elevated Resistance index (RI 0.5) on hCG injection day of IUI cycle were enrolled and treated with low molecular weight heparin (Clexan® 40mg) during luteal period. Anticardiolipin antibodies IgM/G, antiphospholipid antibodies IgM/G, lupus anticoagulant, anti-β2 glycoprotein-1 antibodies IgM/G, protein C activity, protein S activity, antithrombin III activity, plasminogen activator inhibitor-1 (PAI-1), homocysteine, MTFHR gene polymorphism(C677G), and factor V Leiden mutation were investigated. RI of subendometrial blood flow was measured by transvaginal ultrasonography on hCG injection day of IUI cycles. After heparin treatment in women with elevated RI, changes of subendometrial blood flow and b-hCG were measured 2 weeks after IUI. Per the presence of thrombophilia, changes of subendometrial blood flow, clinical pregnancy rate and ongoing pregnancy rate were compared. **Results:** In women with poor subendometrial blood flow, elevated RI 0.63 ± 0.08 was significantly improved after LMWH treatment to 0.39 ± 0.09 (Wilcoxon rank test, p0.01). The clinical pregnancy rate and ongoing pregnancy rate after heparin treatment were 7/32 (21.9%) and 6/32 (18.8%). The thrombophilic risks such as antiphospholipid antibodies, protein S deficiency, protein C deficiency, antithrombin III deficiency, and hyperhomocysteinemia were found 15 out of thirty-two women. The declination of RI after LMWH in women with thrombophilic risk was 0.25 ± 0.11, similar with 0.22 ± 0.09 in women without thrombophilic risk. In women with thrombophilia, clinical pregnancy rate and ongoing pregnancy rate after heparin treatment were 20.0% and 13.3%, separately. In women without thrombophilia, clinical pregnancy rate and ongoing pregnancy rate were 23.5% and 17.6%. Pregnancy outcomes after IUI were not different statistically regardless of thrombophilia. **Conclusion:** Elevated resistance index(RI) of subendometrial blood flow was significantly improved after low-molecular weight heparin(LMWH) treatment, however, ongoing pregnancy rates were not different regardless of thrombophilia.

P100-1095
A COMPARISON OF IMMUNOREGULATORY PROTEIN PROFILE IN PLASMA BETWEEN WOMEN WITH AND WITHOUT HISTOLOGIC CHORIOAMNIONITIS IN PRETERM PREMATURE RUPTURE OF MEMBRANES

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Problem statement: We aimed to compare the profiles of immune-regulatory proteins in plasma of women with preterm premature rupture of membranes (pPROM) and histologic chorioamniontis (HCA) with those without HCA, and to identify novel plasma biomarkers for HCA. **Methods:** Plasma samples were obtained **Results:** Microarray analysis shows that 77 human proteins studied exhibited intergroup differences; all of them were upregulated in women with HCA compared to women without HCA. Validation by ELISA confirmed significantly higher levels of IL-6, MMP-9, and S100 A8/A9 in women with HCA, compared with control subjects. However, we could not confirm the protein microarray results for IL-8, Pref-1, angiopoietn-2, M-CSF, TIMP-1, CXCL14, and IGFBP-2. **Conclusion:** The protein expression pattern in the plasma is significantly altered between pPROM women with HCA and those without HCA. The increased levels of IL-6, MMP-9, and S100 A8/A9 in plasma of pPROM women with HCA indicated that maternal systemic inflammatory response in the maternal plasma compartment is involved in the pathogenesis of HCA, and suggest candidates of potential new biomarker for HCA.

P101-1363
TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) FOR PRIMARY DYSMENORRHEA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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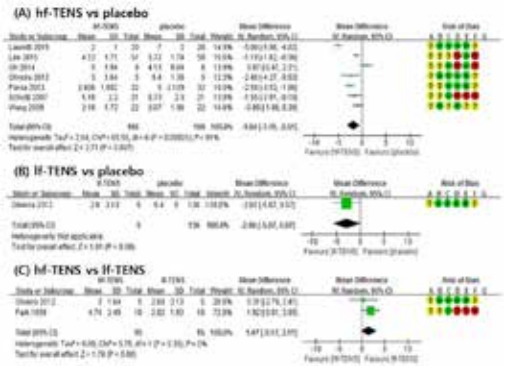
Problem statement: Primary dysmenorrhea is defined as cramping pain during menstruation without any identifiable pelvic pathology, leading to the restriction of daily activities. Nonsteroidal anti-inflammatory drugs (NSAIDs) and oral contraceptives (OCs) are recommended as a first-line treatment. Transcutaneous electrical nerve stimulation (TENS) is a non-pharmacological intervention shown to be effective for pain relief in a variety of conditions. Our study aims to determine the efficacy of high- and low-frequency TENS compared to placebo for primary dysmenorrhea. **Methods:** We searched the following 16 electronic databases for relevant articles published before November 2016: MEDLINE, EMBASE, CENTRAL, Allied and complementary medicine database (AMED), Cumulative Index to Nursing and Allied Health Literature (CINAHL), KoreaMed, Korean studies Information Service System (KISS), Korean medical database (KMbase), National Digital Science Library (NDSL), Korean Institute of Science and Technologe Information (KISTI), Korean Traditional Knowledge Portal, Oriental Medicine Advanced Searching Integrated System (OASIS), China National Knowledge Infrastructure (CNKI), Wanfang, VIP, and CiNii. The inclusion criteria were RCTs of TENS compared to placebo, no treatment, or medical treatment for primary dysmenorrhea of reproductive age. Exclusion criteria were secondary dysmenorrhea due to any pelvic pathology. Risk of bias in each article was assessed per Cochrane risk of bias tool for RCTs by three independent reviewers. For the statistical analysis, the mean differences (MD) or standardized mean differences (SMD) was calculated with 95% confidence intervals (CIs) using the Review Manager software (RevMan v5.3). **Results:** 80 RCTs were finally included in systematic review, and meta-analysis was done with 16 RCTs. Most studies showed low or unclear risk of biases. High-frequency TENS was shown to be more effective than placebo TENS (SMD -1.84, 95% CI [-3.16, -0.51], P=0.007, Fig. 1(A)). Low-frequency TENS was found to be no more effective in reducing pain compared to placebo TENS (SMD -2.80, 95% CI [-5.67, 0.07], P=0.06, Fig. 1(B)). It is still uncertain that high-frequency TENS was more effective than low-frequency TENS (SMD 1.47, 95% CI [-0.17, 3.11], P=0.08, Fig. 1(C)).



Conclusion: The result of this study shows that high-frequency TENS was shown to be more effective than placebo TENS, whereas low-frequency TENS was found to be no more effective in reducing dysmenorrhea compared to placebo TENS. Additional studies to convince that high-frequency TENS is more effective than low-frequency TENS are needed.

P102-1373
ULTRASOUND EVALUATION OF CESAREAN SCAR – NICHE PREVALENCE AND ASSOCIATED SYMPTOMS

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Problem Statement: Inadequate scarring, resulting from a cesarean section, can lead to a niche, which may potentially be associated with gynecological symptomatology and poor obstetric outcomes. Our objective is to assess the prevalence of uterine niche in women with previous cesarean section and its relationship with gynecological symptoms, namely postmenopausal bleeding, abnormal uterine bleeding (AUB), urinary symptoms and vaginal discharge. **Methods:** Prospective study, carried out between February 2016 and January 2017, which included all the women submitted to gynecological ultrasound who presented cesarean section scar, in an Ultrasonography Unit of a tertiary hospital. The presence of a niche was considered when the myometrial discontinuiation was greater than 2 mm. In women with niche, we evaluated the shape, dimensions, total and residual myometrium. The gynecological symptomatology was evaluated using the clinical records of the patients. **Results:** A total of 390 women were included, with a mean age of 46.8 ± 8.75 years (24-80 years). The overall prevalence of uterine niche was 15.6% (n=68). AUB was reported in 4.5% of women with a previous cesarean section without a niche (n=14) and 21.4% of women with a niche (n=12, p 0.001). The prevalence of vaginal discharge also appears to be increased in women with previous cesarean section who present a niche compared to those without a niche [5.1% (n=16) vs. 14.3% (n=8), p=0.011]. However, no statistically significant differences were found regarding urinary symptoms between the two groups (p=0.927). The niche shapes most frequently found were inclusion cyst (40%), triangle (25%) and droplet (18.3%). No statistically significant differences were found in urinary symptoms (p=0,498), AUB (p=0,436) and vaginal discharge (p=0.844) related to the shape of the niche. Besides that, the size of the residual myometrium does not seem to affect the prevalence of AUB (p=0.714), vaginal discharge (p=0.648) or urinary symptoms (p=0.963). **Conclusion:** The prevalence of niches in women with previous cesarean section in this study is lower than that described in the literature, even though this is very variable. There was an increase in the prevalence of AUB and vaginal discharge in women with a niche. The shape of the niche and the size of the residual myometrium do not seem to influence the presence of symptomatology.

P103-1152
USE OF MOLECULAR GENETIC MARKERS FOR THE PREDICTION OF CLINICAL COURSE OF OVARIAN HYPERSTIMULATION SYNDROME

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The need for OHSS prevention in individual patients is usually assessed based on clinical risk factors, for example the levels of AMH, FSH, antral follicle count (AFC), etc. However, preventative strategies for OHSS fail in some patients who still develop the complication. This has led to a hypothesis that finer molecular factors such as genetic polymorphisms may predispose patients to OHSS, and the risks of this complication may not be predicted fully until molecular genetics tools are routinely applied in the clinical practice. A case-control study including 287 women was carried out from November 2013 till May 2016.Fifty-nine patients from both groups developed clinically relevant OHSS (Group 1 – early OHSS, n=41; Group 2 – late OHSS; n=18). Inclusion criteria for Group 1 included presence of clinical symptoms of OHSS 3 to 9 days after ovulation trigger injection. For inclusion into Group 2, clinical symptoms of OHSS had to manifest 9 to 12 days after ovulation trigger injection. Gene polymorphisms were identified using qPCR with the following gene *loci*: IL18, ICAM1, VEGFA, BSG, AMH, IL2, LHCGR, EDN1, IL6, AMHR2, EDNRA, FSHR, IL1R1, INHA, ESR1, TNF, IL1B, ESR2, TSHR, IL8, ACE. To predict the onset of early and late OHSS, we performed a ROC analysis of the association between the early and late OHSS and general clinical and laboratory parameters. Early OHSS was significantly associated with AMH (AUC - 0,677 (95% 0,602-0,751) and AFC (AUC - 0,664 (95% 0,585-0,742)). We established that the AMH threshold of 3.7 ng/ml and AFC threshold of 14 follicles had an 82% and 84%sensitivity and 54% and 47% specificity in predicting early OHSS, respectively. ROC analysis of association between late OHSS and clinical and laboratory parameters has not revealed any significant predictors. To predict the development of early and late OHSS, a search for genetic markers associated with OHSS onset was conducted. Per the binary logistic regression modeling, only four genotype variables could be used to predict early OHSS. These included the VEGFA -2578(-2595) AC [rs699947], VEGFA 936 CT [rs3025039], LHCGR 935 AG (Asn312Ser) [rs 2293275], and ESR1 -351 AG [Xbal] [rs9340799] genotypes. Another two genotype variables allowed to predict late OHSS (ESR1 -351 AG [Xbal] [rs9340799] and ACE 287bp InsDel ((ALU)/-) [rs4340]). The C/C genotype of TSHR:2181CG (Asp727Glu) [rs1991517] was significantly associated with OHSS onset (OR=1.96 (95%CI (0.94-4.11); p=0.042). Genetic factors contributed approximately 25% to the development of early and late forms of OHSS (calculated by Nagelkerke method). This study opens new possibilities for OHSS prediction as it demonstrated the association between the clinical course of OHSS and the patient's genotype. Combined evaluation of clinical and genetic predictors will allow us to tailor ovarian stimulation and, consequently, reduce the OHSS risks.

P104-1330
MITOTIC SPINDLE MORPHOLOGY & AUTOMATIC ZONA PELLUCIDA SCORING USING OCTAX POLAR AIDE SYSTEM

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Problem statement: Oocyte fertilisation in assisted reproduction by the method of intracytoplasmic sperm injection (ICSI) is based on selecting mature oocytes in metaphase II stage (MII). Cytoplasm maturity, which is one of the oocyte maturity markers, does not have to correlate with nuclear maturity. This obstacle can be overcome by assessing the presence and location of the mitotic spindle to set the right time for oocyte fertilisation by the ICSI metod. Visualisation of the mitotic spindle can be done by the OCTAX polar AIDE™ system. **Methods:** 16 women between the ages 25 – 44 were enrolled in the study. In total 113 oocytes in MII stage were assessed. Oocytes were divided into two groups A and B based on the patient's age. 75 oocytes were in group A (38) and 38 in group B (≥ 38). Oocytes were screened on the WillCo-Dish (WillCo-Wells B. V.) for the presence or absence of the mitotic spindle using the OCTAX polar AIDE™ (MTG) system along with the morphology and automatic refraction asssessment of the zona pellucida (ZP). All data were analyzed using IBM SPSS Statistics 23 software. All statistically significant results had P value0.05. **Results:** Mitotic spindle was detected in 94 denuded oocytes 38 – 40 hours after hCG application and correlated significantly (P=0.006) with patient's age. Oocytes with detectable mitotic spindle were further assessed for its morphology and classified into 4 categories (normal, dysmorphic, telophase, translucent). However, there were no significant differences between groups A and B in relation to their morphology. Automatic ZP assessment in all 113 oocytes suggested stronger developmental ability of embryos from group A (77.3 %) as compared to group B (50 %). **Conclusion:** Our study has demonstrated that mitotic spindle and automatic ZP evaluation are valuable non-invasive markers for more complex view on embryos suitable for embryotransfer. Supported by MH-CZ DRO (FNOL, 00098892).

P105-1407
UTERINE ATONY: 10 YEAR REVIEW

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Problem statement: Uterine atony is thought to be the most common cause of postpartum hemorrhage and a major cause of maternal mortality worldwide. This study aimed to determine population specific risk factors and obstetric outcomes for uterine atony cases in our department for the last ten years. **Methods**: A retrospective observational study was conducted from 2006 to 2016 in Department of Obstetrics and Gynecology of Centro Hospitalar do Baixo Vouga. A total of 50 cases of uterine atony were identified for

analysis in this study. Clinical files were reviewed concerning demographic factors, obstetric background, particularities of the pregnancy and labour, and lastly the applied management strategies. **Results**: Fifty cases of uterine atony were diagnosed and managed in our department between 2006 and 2016. Twelve women (24%) were at least thirty-five years old. Thirty (60%) were primiparous. In thirteen cases (26%) labor induction was required. There was only one occurrence of multiple pregnancy. Most of pregnancies had a normal evolution, and the most common condition associated was gestational diabetes (7 cases) followed by gestational hypertension (2 cases). The average labour time was approximately 6,1 hours. Concerning the type of delivery, 18 women (36%) had a cesarean section while 32 (64%) had a vaginal delivery (16 assisted). The average weight of newborns was 3358g with 6 newborns (12%) weighing more than 4000g.Treatment was provided per severity of the clinical situation. In one case, the uterine massage was the only treatment needed. Almost every patient received oxytocin infusion. Rectal misoprostol was used in 39 women (62%) and sulprostone perfusion in 19 (38%). Instrumental revision of the uterine cavity had to be undertaken in 14 women (28%). In 12 cases (24%), surgical treatment was needed: in 4 the atony resolved with uterine curettage and in 2 cases B-Lynch suture was performed successfully. Six hysterectomies were performed: 3 after cesarean delivery and 3 after vaginal delivery. Half of the women needed blood cell transfusion and 5 (10%) were admitted to the Intensive Care Unit. **Conclusion**: Uterine atony is identified as one of the major causes of postpartum hemorrhage and therefore associated with significant maternal morbidity and mortality. Understanding the population specific risk factors for uterine atony would be of great importance to prevent this clinical condition and decrease adverse outcomes. Nevertheless, a clear association between demographic factors, obstetric background and the occurrence of uterine atony could not be demonstrated in our population. Primiparity was the most consistent risk factor. The major complications identified in our review were the need of blood transfusions, hemodynamic instability requiring admission to the Intensive Care Unit and the need of hysterectomy as a lifesaving procedure in six women. When medical treatment fails, clinicians must be prepared to perform specific surgical measures to preserve future fertility. Unfortunately, in some cases hysterectomy cannot be avoided and prompt decision making is essential to prevent catastrophic outcome such as maternal death.

P106-1387
DIFFERENCES IN PERINATAL OUTCOMES BETWEEN WOMEN WITH SPONTANEOUS PREGNANCY AND PATIENTS UNDERGOING TO IN VITRO FERTILIZATION IN WOMEN AGED 40 YEARS OR ABOVE

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Problem statement: In Western countries, women *delay* the age of their first *pregnancy but* postponing pregnancy is a risk for women and pregnancy outcomes. In women aged 40 years or above, the clinical pregnancy rate decreased and assisted reproductive techniques are often recommended. The objective of this study was to compare pregnancy outcomes in women with spontaneous pregnancy (SP) versus patients undergoing in vitro fertilization (IVF) in women aged 40 years or above. **Methods:** We retrospectively analysed data of a cohort of 479 women aged 40 years or above that gave birth in our hospital between January 2015 and December 2016. Multiple pregnancies were not included. Seventy-eight women got pregnant after IVF and 401 became pregnant spontaneously. Risk of pre-eclampsia, gestational diabetes, operative delivery and post-partum haemorrhage rates were assessed. **Results**: Vaginal birth rate was similar between SP and IVF (75.3% vs. 70.5%, p= 0.454). Likelihood of assisted vaginal delivery with the help of forceps or vacuum device was lower in SP than in IVF arm (30.1% vs 56.4%, p0.001). There was not significant difference between both arms of the study in pre-eclampsia, gestational diabetes and post-partum haemorrhage rates. **Conclusion:** In our study, perinatal outcomes were no significantly different in women aged 40 years or above after IVF and only a higher rate of assisted vaginal deliveries was detected.

P107-1557
ENDOMETRIOID CARCINOMA OF DOUGLAS POUCH 9 YEARS AFTER VAGINAL HYSTERECTOMY AND BILATERAL SALPINGO-OOPHORECTOMY: IS ENDOMETRIOSIS THE ANSWER?

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Problem Statement: Primary extrauterine endometrioid carcinoma arises from ectopic endometrioid tissue. In 1925, Sampson first reported malignant transformation of endometriosis to carcinoma, which may occur in up to 1% of the affected women. The ovary is by far the most common site and extragonadal malignant transformation of endometriosis has been identified in only 20% of these patients. This indicates a not negligible risk of extrauterine endometrioid carcinoma diagnosis even after hysterectomy and bilateral salpingo-oophorectomy. **Methods**: Case report, clinicopathologic description and overview discussion of differential diagnosis and clinical management approach. **Results:** We report a case of a 69-year-old woman who underwent vaginal hysterectomy and bilateral salpingo-oophorectomy with Kelly-Kennedy surgery for the treatment of uterine prolapse and urinary stress incontinence. Histologic examination showed atrophic endometrium and adnexa, with no evidence of malignancy. Nine years after the surgery, the patient presented with abnormal vaginal bleeding. Abdominopelvic CT scan showed a cystic lesion just above Douglas pouch. A vaginal cuff fistula was observed and a curettage of its tract was performed, whose biopsy pointed to endometriosis/infected cyst. Pelvic MRI revealed a 22mm diverticular nodule contiguous to Douglas pouch. Rectosigmoidoscopy had no relevant findings. Diagnostic laparoscopy was performed and a non-capsulated 3cm nodule of Douglas pouch was excised. The vaginal cuff fistula, which communicated with the mass, was vaginally repaired. Histologic examination of the surgical specimen revealed a well-differentiated endometrioid carcinoma, supported by immunohistochemical study (positive staining for cytokeratin 7 and estrogen receptors and negative for cytokeratin 20), probably arising from foci of endometriosis considering the previous medical history. PET scan had no signs of metastatic disease. The patient completed pelvic radiotherapy and is currently completing the second year of follow-up with no evidence of relapse. **Conclusion**: In this case, histology and immunohistochemical staining suggest endometrioid carcinoma in a woman with no uterus and adnexa. Differential diagnosis between primary endometrioid carcinoma of pelvic peritoneum, endometrioid ovarian cancer of a possible remaining ovarian stump or late metastasis of a non-diagnosed endometrioid carcinoma of the excised uterus is mandatory for clinical management and treatment approach. The fact that endometriosis was identified at the vaginal cuff fistula biopsy, the absence of other malignant peritoneal lesions and normal histologic findings in the first surgery are in favour of the diagnosis of a malignant transformation of an endometrioid lesion. Further studies should focus on the pathophysiologic mechanisms of progression to malignancy in order to identify patients with higher risk and to search for effective diagnostic tools and therapies.

P108-1056
VERTICAL TRANSMISSION OF HIV IN MEXICO 1986-2016

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Problem Statement: Perinatal transmission of HIV is a public health problem in many countries and a sensitive indicator that indirectly measures the quality of the health system and social justice. Mexico has an official record of perinatal HIV cases since 1986. Achieving the first generation of HIV and perinatal syphilis is one of the goals of sustainable development (SDG) for the year 2030**. Methods:** Epidemiological records of vertical HIV transmission in Mexico were reviewed from 1986 to 2016. During this period, a total of 3,686 cases were reported. The most important critical causes are the late diagnosis of the causes, which originate from prenatal control without systematic screening through rapid tests. Attention process: it is very important to offer and screen HIV and syphilis in the first 12 weeks of pregnancy immediate diagnostic confirmation when there is reactive test and initiation of highly effective antiretroviral therapy before 16 weeks to carry the pregnant women undetectable viral load; resolve cesarean section pregnancy and stop breastfeeding, prophylactic treatment to the neonate and follow-up for 18 months with laboratory tests. All, critical events that are not always fulfilled. When the diagnosis is unknown, in some cases the risk of infection during labor and in the postnatal stage increases with breastfeeding. **Results:** In 1986, the first six cases of HIV were recorded in México; in 1998, it registered 101 cases and from there, an increase that reached its historical maximum was observed in 2007, with a total of

257 cases registered and later a gradual reduction is observed up to 92 cases in 2016. Each year a total of 2.2 million pregnant women. In the last year, of the total of 32 states, the cases were concentrated in 22 stataes, six of these are concentrated in 58% of the cases and 10 states not report any. In the last three years 2014-2016, in 41% of cases, diagnosis was made in the first 24 months and in 59% of cases after 25 months. **Conclusion:** Perinatal transmissión de HIV continues to be a public health problem in Mexico. The main critical causal identified was the fragmentation of care. International organizations, WHO, UNFPA, UNAIDS and IPPF, proposed a frame of reference. Promote connection between HIV and AIDS services with maternal and child health. Mexico, meets the proposed. However, this link is diluted in the vertical operation of the programs. In the last decade, we work on a national process that impacts this indicator, strengthening detection and ancreasing the quality of obstetric care is the next challenge, as well as focusing on the six priority states. The lesson learned from 34 years of HIV epidemic, should speed up the process. The goal is to reduce 84% of cases from 2013 to 2018. It is also important to incorporate the father throughout the care process and move from the mother-daugther or son binomial, to the father-mother-daugther trinomial and son, both for HIV and AIDS and for congenital syphilis. Social determinants are an essential factor, 85% of the cases are concentrated in the population without social security and 15% in the population with social security. Provinces with social inequality and dificulty accessingservices.
Disclosure of interest: None Declared.

P109-1064
PREGNANCY AND HIV MUST BE AN ABSOLUTE INDICATION OF CESAREAN SECTION?

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Problem Statement: Vertical transmissión of HIV can occur during pregnancy, birth and breastfeeding. C-section is a surgical procedure that aim to reduce maternal and fetal morbidity and mortality when there is an accurate indication to perform it. Absolute indications prevent morbidity and mortality. Until today, HIV infection is incurable. The pregnant woman should ideally be detected in the first trimester of pregnancy and week 16 should initiate prophylactic management with highly effective antiviral therapy. To reduce the possibility of perinatal transmission. **Methods:** Specific proposal is to include pregnancy with HIV as an absolute indication for cesarean delivery at term, intact membranes and without labor, which should minimize the risk of perinatal transmission by not subjeting women to uterine activity and rupture of membranes. There is published evidence that, without prophylactic treatment, aproximately 15-30% of infants born to HIV-infected women become infected during gestation, and 5-15% more can become infected through breastfeeding. With prophylactic treatment and suppressed viral load prior to birth reduces the risk of transmission during delivery. The uterine work implies an implicit risk of trasmission and is aggravated when the rupture of membranes lasts more than 4 hours. The argument is the surgery allows maximum prevention of transmission through a clinical intervention and prevents a fetus with HIV that will carry the infection throughout its life. **Results:** The absolute indication of cesarean section of a pregnant woman with HIV can reduce the possibility of perinatal transmission to less than 2% when indicated at the end of pregnancy without labor, with intact membranes, suppressed viral load and prevents breastfeeding. Reducing the possibility of transmissión should be included on counseling the couple, for decision making at birth and assessing risk benefit. **Conclusion:** Since 1985 the WHO has warned about high rates of cesarean section. There is a contradiction, cesarean is performed, without precise indication in documented cases and when it is needed, sometimes it is not performed. The severity of the transmission of perinatal HIV and the small number of cases justifies as an absolute indication. If it is intended to reach, as a WHO brand, the first generation free of HIV in the year 2030, it is necessary to use all available resources of science. The absolute indication of cesarean section, are intended to prevent biological catastrophes during birth; to prevent transmission of HIV by the perinatal route, meets this preventive criterion that should be used as an indication in the practice of the obstetrician and is based on available scientific evidence. A correct care process can prevent 98% of cases of perinatal transmissión. Professional accident risk during a cesarean section and a woman with HIV, Center for Disease Control (CDC) reports 0.3% reduces with prophylactic management of exposed staff and increases with exposure to large amounts of blood or deep wounds.
Conflict of interest: *None Declared.*

P110-1172
PERINATAL RISK FACTORS ASSOCIATED WITH CEREBRAL PALSY IN CHILDREN BORN IN ODESA OBLAST REGION (UKRAINE)

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The etiology of cerebral palsy (CP) is very diverse and multifactorial including prenatal, natal, and postnatal factors Studies have reported that the prevalence of cerebral palsy may vary between 1.5 and 3.0 per 1000 live births. Several hypotheses have been proposed to explain the origins of CP in very preterm babies. It may be the result of an ischemic insult in utero leading to both preterm birth and damage to the white matter. The immature babies are particularly vulnerable to cerebral hemorrhage and ischemia. Neonatal factors such as: seizures, prolonged ventilation, intraventricular hemorrhage, periventricular leukomalacia, bronchopulmonary dysplasia, sepsis. **Methods:** The aim of this study was to identify antenatal, intrapartum and neonatal risk factors for cerebral palsy. Antenatal, intrapartum, and neonatal events were compared between 100 children with CP and 100 controls in a retrospective case-control method. Antenatal, intrapartum and neonatal factors were expressed as odds ratios and 95% confidence intervals. **Results:** Major risk factors found in this study were history of spontaneous abortions in 28 (28%), anemia during pregnancy in 35 (35%), hypertension in 12 (12%), obesity of 2-3 degrees in 18% and history of infection in 8% mothers. In total, 44 (44%) children were born preterm and 10 (10%) were born in multiple births. Infants born preterm had a highly increased risk for CP, and constituted 44% of all cases; OR 21.8 (95% CI 29–39) in weeks 26–28, OR 29 (95% CI 32–42) in weeks 29–30, OR 42 (95% CI 24–70) in weeks 31–32, and OR 44.7 (95% CI 34-77) in weeks 33–34. Other factors associated with CP were being small or large for gestational age at birth, intrauterine growth restriction (IUGR) OR 7.4 (95% CI 2.4-18.5), abruptio placentae (OR 8.6, 95% CI 5.6–13.3), preeclampsia (OR 42, 95% CI 2.4–7.7), being a twin (OR 25.5, 95% CI 1.5–45.5), smoking (OR 4.1, 95% CI 1.1–15). In term infants, low Apgar scores were associated with a high risk for CP; OR 53.2 (95% CI 31–89) at score 6 at 5 minutes, OR 104 (95% CI 6.2–172) at score 3. Other factors associated with CP in term infants were breech presentation at vaginal birth (OR 3.8, 95% CI 2.4–10.4), instrumental delivery (OR 2.9, 95% CI 1.6–5.3), and emergency cesarean delivery (OR 2.5, 95% CI 1.6–6.2). The most frequent risk factors in the postnatal period were high fever in 12%, convulsion in 34%, intraventricular hemorrhage in 21%, hypoxic-ischemic encephalopathy in 28% and jaundice in 16% of newborns. Respiratory distress syndrome, prolonged ventilation was in 25% of newborns. Severe cranial ultrasound abnormality in 45% newborns were associated with an increased risk of CP in the neonatal period. Conclusions: Our findings confirm that several antenatal factors as smoking, preeclampsia, obesity, anemia, IUGR; intrapartum factors as abruption placenta, preterm birth, breech presentation, low Apgar scores and neonatal risk factors as convulsion, intraventricular hemorrhage, hypoxic-ischemic encephalopathy, jaundice, respiratory distress syndrome, prolonged ventilation in babies are responsible for the etiology of cerebral palsy.

P111-1439
POSSIBILITIES OF PELVIC FLOOR MUSCLES ELECTROMYOGRAPHY IN A WOMAN AFTER ISCHEMIC STROKE - CASE REPORT

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Problem statement: An interdisciplinary approach to the problem of lower urinary tract dysfunctions in women after ischemic stroke is an important issue for holistic treatment of such patients. These patients may have trouble in conscious and controlled urination or lack of bladder pressure. The primary aim of the study is the objective electromyographic assessment of pelvic floor muscles (PFM) and their ability to correct contraction in women after ischemic stroke with stress urinary incontinence (SUI). **Methods:** Woman (51 years old) 6 years after stroke was recruited from patients at the Department and Clinic of Urology, University Hospital in Wroclaw, Poland. The patient suffered from symptoms of SUI. Evaluation of the bioelectrical activity of the PFM was performed by electromyography MyoSystem 1400L (Noraxon, USA) and a vaginal probe. The protocol of all measurements of PFM activity consisted of the assessment of such

elements as “baseline”, “quick flicks”, “contractions”, “static hold”, “rest tone”. The same measurements were performed in a 50-year-old woman with SUI symptoms without the history of stroke. The study was a part of research project number STM.E063.16.45. **Results:** During "rest tone" the sEMG activity in the woman after stroke was 4.24 and in the woman without stroke was lower and amounted to 1.60. During "quick flicks" and "contraction", bioelectrical activity was similar (7.51 vs. 7.77 and 9.46 vs. 9.38). **Conclusion:** Despite the higher resting bioelectric activity of PFM in the woman after stroke, no higher activity of these muscles during contraction was observed. This may be a signal that the awareness and ability to perform PFM contraction is lower in people after stroke. A full survey should be conducted on a representative sample of persons to verify this information.

P112-1089
KNOWLEDGE, ATTITUDE, AND BEHAVIOUR TOWARDS HUMAN PAPILLOMA VIRUS (HPV) VACCINE AMONG WOMEN IN CIRACAS COMMUNITY HEALTH CARE

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Introduction: Cervical cancer is the second most common cancer suffered by women in the world. Infection of Human Papilloma Virus (HPV) is the main cause of cervical cancer which can be prevented up to 70% with vaccination. To reduce the incidence of cervical cancer, Indonesia is establishing HPV vaccination program for adolescence. However, in Puskesmas, the primary health care center, HPV vaccination rates are still very low. Therefore, this study was conducted to find out the correlation between knowledge, attitude, and behavior of productive age women in Ciracas sub-district to HPV vaccination. **Methods:** This study used cross-sectional descriptive analytic design to find out the relationship between knowledge, attitude, and behavior of women in Ciracas Sub-district, Jakarta and the number of people receiving HPV vaccination. The data that has been collected were verified, edited, and coded for inclusion and processing using SPSS for Mac version 21.0. Characteristics of sample population are defined using specific outcome measures that include age, education level, current occupation, and sexual history. **Results:** In overall included population for the study (n=56), 26.7% have good knowledge, 39.28% have adequate knowledge, and 34.02% have poor knowledge on the definition and importance of HPV vaccination. Regarding the attitudes, 35.7% of overall respondents show good attitude, 33.9% show fair attitude, and 30.4% show poor attitude towards HPV vaccination.

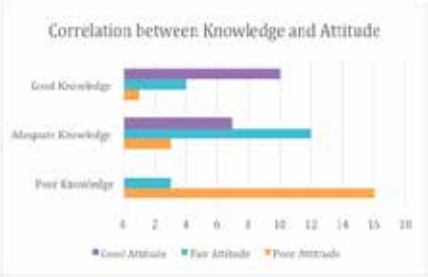

Figure 1. Per the data collected, 26.7%, 39.28%, and 34.02% of the respondents have good, adequate, and poor knowledge on HPV vaccination. Among those in good knowledge category, people tend to have good attitude (66.7%) towards HPV vaccine. It is quite predictable that people with poor knowledge are very likely to have poor attitude (84.2%). However, this correlation is not proven to be statistically significant (p=0.052).

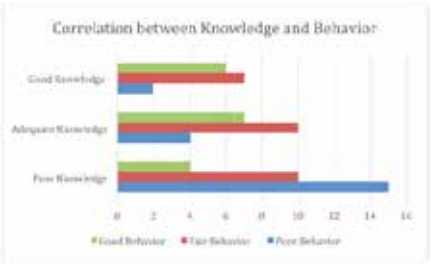

Figure 2. Most included population of the study (55.36%), accounts for poor behavior towards HPV vaccination, while 30.36% and 14.28% account for fair and good behavior. Among the population with good knowledge, surprisingly, less people have good behaviour compared to the people in the adequate knowledge category. As predicted, people with poor knowledge are likely to have poor behaviour towards HPV vaccination.

Figure 3. There are only 7% of respondents with good behavior and majority have enough attitude with enough behavior (36%). There was a statistically significant correlation between respondent age and knowledge of HPV vaccine (p = 0.036). There was a statistically significant positive correlation between the educational level of the respondents and the knowledge of HPV vaccine (p 0.001). **Conclusion:** Most respondents were in the ideal reproductive age (52%) where 21% of the respondents had never had sexual intercourse. There was a statistically positive significant correlation between respondent age and knowledge of HPV vaccine (p 0.05). Most respondents with good knowledge also have a sufficient attitude to support HPV vaccination. However, there was no statistical significant correlation between attitude and behavior, as well as knowledge with behavior (p 0.05). Respondent behavior is more influenced by other factors such as social, cultural, and economic background. In conclusion, knowledge and attitude of respondents represent awareness towards HPV vaccine, while respondents still have inadequate supportive behavior. Knowledge influenced attitudes toward HPV vaccination, however it did not affect their behavior. Behavior is also not influenced by the attitudes of respondents, it is possible to be more influenced by their social, cultural, and economic.

P113-1201
MULTIPLE PARASITIC FIBROIDS IN DIFFERENT LOCATIONS- A CASE REPORT

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Problem statement: Parasitic fibroid is a rare phenomenon in which the fibroid gets partially or completely separated from the uterus and receives its blood supply from another source. This rare type of fibroid was first reported a century ago which was considered to have arisen due to torsion around its pedicle becoming separated from uterus and receiving blood supply from omentum or mesenteric vessels. But a sharp rise in the incidence of such cases in recent years following widespread use of laparoscopic power morcellation has thrown light on the iatrogenic etiology of parasitic fibroids. **Methods**: Description of a case of multiple parasitic fibroids in different locations discovered in a woman few years after laparoscopic myomectomy. **Results:** A 40-year-old woman was outpatient in Gynaecology clinic, Singapore General hospital with palpable masses in the abdominal wall. She gave history of laparoscopic myomectomy done for a single 6cm intramural anterior wall fibroid 7years ago. Ultrasound imaging revealed multiple discrete masses of about 4-7cm in the subcutaneous layers at the region of the umbilicus and a 7cm fibroid posterior to the uterus which clinched the diagnosis of parasitic fibroids. She underwent laparotomy with removal of three parasitic fibroids from the subrectus layer at the level of umblicus and a fibroid of 8cm in the Pouch of Douglas arising from the posterior peritoneal wall. The diagnosis was confirmed by histology. **Conclusion**: Reporting of such iatrogenic parasitic fibroids will help to remind gynaecologists to be cautious during laparoscopic morcellation of tissue to avoid this complication by taking adequate measures such as thorough inspection and repeated irrigation to remove all morcellated fragments during laparoscopy and morcellation within an endoscopic bag.

P114-1306
ENDOMETRIOSIS-ASSOCIATED OVARIAN CANCER: CLINICAL AND PATHOLOGICAL FEATURES OF A RETROSPECTIVE STUDY/H2

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Problem statement: Endometriosis has been found to be associated with an increased risk of ovarian cancer. However, despite clear evidence revealing that endometriosis increases ovarian cancer risk, the most recent meta-analysis revealed that tumors originating from endometriosis have some common features: younger patients, lower stages at diagnosis and higher degree of differentiation, having better prognosis. Recent studies demonstrate that transformation of endometrial lesions into malignant neoplasm indicate that oncogenesis occurs more often in foci located in the ovaries. Specific histopathological sub-types are reported related to endometriosis related ovarian malignancies as clear cell and endometrioid carcinomas. **Methods:** In a retrospective study, we analysed clinical and histopathological data of patients operated in the Gynecology Department of Coimbra University Hospital Center due to ovarian cancer in 2006-2015. Ovarian cancer histological specimens were carefully analysed to identifying those exhibiting endometriosis foci in the stroma of malignant ovary, to ensure the coexistence of both diseases. Statistical analysis was performed using SPSS 22.0. **Results:** Histological evidence of endometriosis was found in 17 out of 261 patients diagnosed with ovarian cancer (6,5%). Concerning these patients' data evidenced that the most usual symptoms were pelvic pain, abdominal distension, asthenia, ascites, weight loss and nausea. Mean age at diagnosis was 61 years old, and 33,3% were pre-menopausal patients. At the time of diagnosis, cancer stage distribution was 31% stage I, 6% stage II and 56% stage III. Ovarian malignancy occurred unilaterally in 14 patients and 2 patients were diagnosed with a synchronous ovarian and endometrial cancer. Regarding histological type, clear cell carcinoma (CCC) was the most prevalent histological type (10 CCC), followed by endometrioid carcinomas (4 EC) and remaining 3 cancers were of mixed type (clear cell and endometrioid). Four ovarian carcinomas arised from isolated ovarian endometrioma, including 3 CCC and 1 EC. **Conclusion:** In accordance with previous studies, clear cell carcinoma was the most common histopathological sub-type in endometriosis related ovarian cancers, followed by endometrioid carcinomas, and two rare synchronous ovarian and endometrial carcinomas were registered. In our clinical data, no significant differences were found in stage disease and age at diagnosis. Overall survival was comparable and further molecular studies are needed to establish the cause-and-effect relationship between endometriosis and cancer. Finally, although incidence of ovarian cancer in endometriosis patients is not significantly high, endometriosis should be managed with special care to ovarian cancer early diagnosis and treatment.

P115-1408
MOLECULAR ASSESSMENT OF ENDOMETRIAL FLUID CAN IMPROVE THE SUCCESS OF EMBRYO IMPLANTATION AFTER ASSISTED REPRODUCTIVE TECHNIQUES

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Problem statement: Recurrent implantation failure (RIF) is a major challenge in assisted reproductive techniques that remains poorly characterized. Although controversial, it can be defined as the failure to achieve a pregnancy after 3 completed fresh IVF-ET cycles and endometrial receptivity plays a crucial role in the success of this process. Implantation is considered the limiting step in the success of assisted reproductive techniques, and endometrial fluid has been recently studied for its role as it undergoes profound molecular changes during the transient window of implantation. **Methods:** A review literature search of the PubMed and Cochrane database was conducted before August 25, 2017 to identify studies published between 2007 and 2017. The following terms were used and adjusted for each database as necessary: endometrial fluid; endometrial fluid collection; endometrial fluid biomarkers; fluid accumulation of the uterine cavity; uterine fluid; endometrial cavity fluid AND assisted reproductive techniques; endometrial fluid AND recurrent implantation failure. Studies were included if they compared the outcomes of analysis of endometrial fluid, and only 4 studies were selected based on their methodological quality. **Results:** There are few studies that contributes to determine which molecular biomarkers are relevant and consistent. Transvaginal ultrasound assessment of the endometrium remains the standard investigation to examine thickness, features and blood flow. However, it is a poor positive predictor of implantation, and the usefulness of some potential mid-secretory biomarkers for early secretory diagnostic was found to be limited. Besides, several different proteins presented in endometrial cavity fluid have been recently described, namely CSF3 and VEGF are critical predictive markers of successful embryo transfer. Furthermore, proprotein convertase 5/6 (PC6) is up-regulated in the human endometrium specifically at the time of epithelial receptivity and is strongly associated with endometrial receptivity and embryo implantation. **Conclusions:** There are strong indicators supporting that endometrial fluid collection and assessment could be used as rapid non-invasive biomarker for the assessment of endometrial receptivity. Therefore, it can predict and improve assisted reproductive techniques outcomes. The establishment of reliable biomarkers of endometrial receptivity will require a large-scale validation. The uterine fluid has advantages when compared with other tests, as it has a simpler proteome than endometrial tissue and is less invasive than tissue biopsies. Furthermore, it can be evaluated at the exactly time of embryo transfer. The later use of appropriate biomarkers will contribute to find the suitable timing for embryo transfer, representing the deployment of this critical step and a fresh hope for infertile couples and for those who diagnose and treat unexplained infertility.

P116-1281
RECURRENT ACUTE NEUROPATHY IN PREGNANCY

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Peripheral autonomic nervous system neuropathy is the commonest diabetic complication. Severity varies in types of diabetes, commonly resulting from persisting hyperglycaemia of long duration. Neuropathic features maybe the first feature of hyperglycaemia in gestational diabetes. With increasing incidence of obesity worldwide in pregnant women, neuropathy may become a more common feature. We present a case of recurrent acute neuropathy in a pregnant patient with type 1 diabetes of 8 years' duration. A 25-year-old caucasian primigravida with type 1 diabetes of 8 years booked for antenatal care at 12 weeks' gestation. Pre-booking diabetic control was suboptimal with HbA1c of 8-8.5%. All booking parameters were normal. Past medical and surgical history were insignificant apart from history of herpes zoster infection at 6 years of age. Eye screen assessment showed background retinopathy in left eye. Further ophthalmic examinations were arranged in second and third trimesters. Glycaemic control was optimised with insulin titration maintaining Hb1Ac levels at 6-6.2%. Pregnancy progressed well until 29 weeks' gestation when she developed acute tingling painful sensation of fingers, with macular rashes all over the trunk and abdomen that were hypersensitive and unbearable to touch. She declined any form of clothing touching her body, wearing only undergarments. She was unable to lie on her bed, perferring instead to walk around the ward with essentials! All creams suggested for relief by neurologists and dermatologists were unhelpful. Pain relief was only achieved with opiates. Ophthalmic examination revealed increasing proliferative retinopathy in her left eye. Assessment of fetal wellbeing could not be carried out with either ultrasound or cardiotocography due to hypersensitivity. Multidiscipinlary team agreed on need for delivery. She was given steriods to optimise fetal lung maturity and delivered by caesarean section that resulted in a live female infant, weighing 1.72kg with Apgar scores of 9/9. Hypersensitivity and acute neuropathic pain resolved spontaneously and the macular rashes a week from delivery. Two years later, she conceived spontaneously. Her diabetic control was suboptimal despite pre-conceptual advice. Glycaemic control was again optimised with insulin as per previous pregnancy. At 31 weeks' gestation, she developed a similar acute episode of painful neuropathy responding only to opioid therapy. She was given intramusclar steriods and delivered by caesarean section at 32 weeks' gestation. The baby was a live male infant weighing 2.34kg with Apgar scores of 10/10. Her painful neuropathic symtpoms resolved spontaneously within two weeks. Acute painful diabetic neuropathy is part of a major diabetic neuropathic complication. Neuropathic symptoms are very distressing. Literature evidence suggests neuropathy is rare in the young and within 10 years of diagnosis of diabetes. Although a rare entity on its own, it is part of the diabetic neuropathic spectrum. The differential diagnosis includes insulin neuritis and severe weight loss neuropathy from

cachexia and anorexia.

P117-1290
MANAGEMENT DIFFICULTIES ASSOCIATED WITH PORPHYRIA IN PREGNANCY

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The porphyria's are a group of metabolic disorders caused by enzyme deficiency responsible for the synthesis of heme. Defective enzyme is mostly caused by mutation in the gene coding for the enzyme. Most porphyria's are genetic and transmitted as autosomal dominant or recessive conditions. Acute attacks, known as acute porphyria crisis are marked by severe abdominal pain and recurrent acute attacks lead to a significant autonomic neuropathy as well as painful sensory neuropathy that may be associated with significant morbidity and mortality. Acute porphyria may be severe particularly in young women, most of which are cyclical and related to menstrual cycle. Chemical induced menopause has occasionally been used to abate recurrent attacks. A 35- year old Caucasian Para 1+1 woman with known diagnosis of porphyria was admitted with acute porphyria in hospital at 19 weeks' gestation. Ultrasound examination confirmed a single active fetus consistent with gestation without abnormality. Her acute porphyria crisis features consisted of severe abdominal pain, bloating, migraine and neuro-psychiatric features of verbal aggression, anxiety and panic attacks with psychiatric/psychological behaviors. She was depressed, weepy and aggressive. She smoked 10 cigarettes a day leaving the ward to smoke regularly. Baseline clinical assessments were: BP 100/50 mm Hg; Pulse 78bpm; height 1.63; weight 77.8kg; BMI 29.3. Pain induced psychiatric morbidity is not uncommon in these unfortunate patients. Pain management included Morphine 5-10mg 6 hourly with anti-emetic prochlorperazine 50mg 4-6thly(prn), Haeme Arginate 225gm intravenously daily for four consecutive days, administered through PICC line over 15-20 minutes and fluid hydration. Advice regarding antenatal, intrapartum and postpartum care was sought from National Acute Porphyria Service (NAPS-UK) without satisfactory response. Experience of managing this condition in pregnancy is very limited. Best optimal location for care was uncertain, however with recurrent acute flare-ups of crisis, planned antenatal reviews at 24, 28, 30 weeks' gestation were carried out on medical ward. At 30 weeks' gestation, intramuscular steroids were administered to optimize fetal maturation, following which a multidisciplinary team (MDT) meeting of an Obstetrician, Pediatrician, Anesthetist, Nurses and Midwives was convened and agreement reached for her delivery at 34 weeks' gestation due to continuing difficulty with her care. Delivery was achieved by elective caesarean. Delivery was achieved by Elective Caesarean section. A female infant weighing 2.52kg with Apgar scores of 7/10 was delivered. Acute porphyria improved spontaneously after birth. No abnormalities were found on the infant. Mother and baby were discharged from hospital after a week. **Conclusion:** We have presented this rare case due to management difficulties encountered and to reiterate the importance of multidisciplinary team care approach when faced with similar difficult case.

P118-1349
BENIGN METASTASIZING LEIOMYOMA: RARE MANIFESTATION OF A FREQUENT PATHOLOGY

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Problem Statement: Uterine leiomyoma is the most common gynecologic tumor. Benign metastasizing leiomyoma (BML) is a rare variant, characterized by multiple leiomyomatous lesions in distant locations, most commonly the lungs. BML is found primarily in reproductive aged women. Patients are usually asymptomatic and the disease is discovered incidentally. Typical radiological finding is multiple bilateral well-circumscribed pulmonary nodules. Histopathological confirmation is required for definitive diagnosis. Treatment of BML is controversial and includes surgical and medical options. The course of this disease is usually indolent, but requires close surveillance. **Methods:** Overview of two clinical cases of BML diagnosed in Portuguese Oncology Institute of Porto in the first semester of 2017 and review of the literature. **Results:** The first patient was a 49-year-old premenopausal asymptomatic woman with history of total hysterectomy 10 years previously due to a leiomyoma of the uterus. She presented with miliary pattern in routine chest radiography, as well in the computed tomography (CT) scan. Positron emission tomography (PET) showed weak fluorodeoxyglucose (FDG) uptake in lung nodules. The patient underwent a CT-guided biopsy of a pulmonary nodule which revealed spindle cells consistent with smooth muscle differentiation, without cellular atypia, necrosis nor mitotic figures. Immunohistochemical staining was positive for smooth muscle actin, desmin, estrogen and progesterone receptors, while ki-67 index was low. Cytogenetic evaluation of lung tumor tissue showed 19q and 22q terminal deletions. Pathology of previous leiomyoma was requested from the hospital where hysterectomy was performed, but was insufficient for cytogenetic analysis. After diagnosis of BML, patient underwent bilateral salpingo-oophorectomy followed by Letrozole. At 5 months' follow-up, no further development of the disease occured. The second case was concerned a 48-year-old premenopausal woman who underwent a hysterectomy 13 years earlier for uterine leiomyoma. She was referred to our center because of persistent cough. Multiple pulmonary bilateral nodules were found in chest radiography and CT. They showed no FDG uptake in PET. CT-guided biopsy of a pulmonary nodule was performed and the resected uterine leiomyoma was reviewed. Both specimens showed identical histopathology, immunohistochemical and cytogenetic characteristics, including sharing of 19q and 22q terminal deletions. These findings were consistent with BML and surgical castration was performed. During 4 months of follow-up, remanining lesions were stable. **Conclusion:** BML is generally considered a monoclonal tumor, with benign appearance and a biological behavior that suggests malignancy. The etiology of BML remains unclear. Our clinical cases support the surgically-induced vascular spread as the most likely causal hypothesis for BML. The diagnosis is challenging and should be based on similar histopathological and immunohistochemical pattern between lung nodules and uterine leiomyoma previously resected. Sometimes the uterine specimen is not available for retrospective review. In these cases, genetic study may be useful for differential diagnosis. Findings of consistent chromosomal abnormalities (deletions of 19q and 22q) allows individualization of BML as a genetically distinct entity, as supported by our study.

P119-1391
MUSCLE METASTASIS FROM CERVICAL CARCINOMA: CASE REPORT

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Problem statement: The incidence of skeletal muscle metastasis from cervical carcinoma is less than 1%. It may be underestimated in the literature, due to difficulties of differential diagnosis. Moreover, several theories support that muscles have protective mechanisms against metastatic invasion. Muscle metastasis usually manifests as local pain, swelling and deformation, per location. Diagnostic imaging findings are not specific for muscle carcinoma metastasis. Metastatic nature of the lesion is confirmed by histopathological evaluation. Treatment options may include surgery, radiotherapy or chemotherapy. Muscle metastasis is generally associated with poor prognosis. **Methods:** Overview of a clinical case of muscle metastasis diagnosed in Divino Espirito Santo Hospital, six months after primary cervical carcinoma and review of the literature. **Results:** A 60-year-old woman with medical history of Diabetes and Hypertension was diagnosed in our center with squamous cervical carcinoma staged as IB1 per the FIGO classification (International Federation of Gynecology and Obstetrics). She was submitted to radical hysterectomy, bilateral adnexectomy and pelvic lymphadenectomy, in Portuguese Oncology Institute of Lisbon, followed by adjuvant radiotherapy and brachytherapy. Six months later, during regular follow up, the patient presented with a single painful swelling in the right shoulder. Physical examination revealed a palpable mass at the tip of acromion that restricted shoulder mobility. The patient was investigated by ultrasonography and contrast enhanced computed tomography (CT) of shoulder, which detected a mass in the deltoid muscle with 5 cm of greater diameter, suggestive of bursitis or deltoid hematoma or cyst. The patient refused to perform a Magnetic Resonance of the shoulder. Needle aspiration cytology from the mass was negative for malignant cells and microbiology. As the swelling was progressively increasing in size, a surgical biopsy of the mass was planned. Histopathological examination was consistent with metastatic squamous cell carcinoma, as primary morphology. Systemic staging, through CT of

the thorax, abdomen and pelvis, revealed pulmonary and bone metastasis. Additional metastatic infiltration of muscles (subscapularis muscle, large pectoralis and small pectoralis) and soft tissues around the right shoulder was also found. Patient was treated with palliative chemotherapy, using carboplatin and paclitaxel combination. Due to progression of the disease, she was admitted to the Palliative Care Unit and succumbed to the disease six months after development of muscle metastasis. **Conclusion:** Metastatic disease will develop in 15 to 61% of women with cervical cancer usually within the first two years of completing treatment. Surveillance after primary therapy for cervical cancer is uniformly recommended for early detection of recurrences. Skeletal muscle metastasis should be thoroughly investigated in presence of painful soft-tissue mass in a patient with known history of cancer. There is a lack of clear guidance for management of such patients. The clinical setting and condition of the patient should always be considering.

P120-1097
COMPARISON OF TWO GROUPS OF DRUGS IN THE TREATMENT OF SYMPTOMATIC UTERINE MYOMA

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Problem statement: Uterine leiomyomata is a common and benign connective tissue tumor. The prevalence is 30% of all women. Leiomyomas is the most important reason of abnormal uterine bleeding that is still a common indication for myomectomy or hysterectomy in the world. The aim of this study is comparison of two groups of drugs in treatment of symptomatic uterine myoma. **Methods:** This is a comparative clinical trial on 48 women with symptomatic uterine leiomyomata accompany vaginal bleeding referred to Dr. Rasekh clinic, Iran. Diagnosis was performed based on clinical symptoms, pelvic examination and ultrasonography. patients randomly divided in two groups: 24 patients in control group treated with Dydrogesterone and 24 patients in case group gonadotropin- releasing hormone agonist (Triptorelin acetate) for 6 months. Data collection was performed via questionnaires and statistical analysis by SPSS 21. **Results:** There is no significant difference between mean size of the myoma before intervention in case and control groups. Mean myoma size is not significant difference in Dydrogesterone usage (control group) before and at the end of six months of intervention. But the mean of myoma size is significant difference in Triptorelin acetate usage (case group) before the intervention 56.45 ± 5.84 and after intervention 50.06 ± 5.30 (pvalue≤.05) that represents a significant reduction of myoma size. Clinical bleeding symptoms improved in both groups which indicate response to treatment. **Conclusion:** Due to the complications of surgical procedures and the results of this research shows that there is a significant decrease in myoma size and response to treatment in Triptorelin acetate usage. Therefore, surgical procedure is not necessary. Medical therapy is recommended as the first choice of myoma treatment.

P121-1383
SUBSEQUENT RISK OF CANCER AMONG WOMEN WITH A HISTORY OF PLACENTAL ABRUPTION

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Problem statement: Little is known about relations between placental abruption and subsequent cancer incidence. Our aim was to assess the subsequent risk of cancer among women with a history of placental abruption. **Methods:** Data on women with placental abruption in a singleton pregnancy between 1969 and 2005 (n=7,804) were collected from the Finnish Hospital Discharge Register and the Finnish Medical Birth Register. The cohort was linked with the Finnish Cancer Registry until the end of 2012. Standardized incidence ratios (SIRs) for different cancers were calculated by dividing the observed numbers of cancers by expected numbers based on national cancer incidence rates. **Results:** During the follow-up, 632 cancers were found among women with a history of placental abruption. The overall cancer risk was not increased (SIR: 0.96, 95% CI 0.88-1.03). However, the history of placental abruption was associated with an increased risk of thyroid cancer (37 cases, SIR: 1.57, 95% CI 1.10–2.15), lung cancer (30 cases, SIR: 1.46, 95% CI 0.98–2.08), and acute leukemia (9 cases, SIR: 2.15, 95% CI 1.10–2.15). A decreased risk was found for anal and rectal cancers (6 cases, SIR: 0.43, 95% CI 0.16–0.94) and for breast cancer (217 cases, SIR: 0.85, 95% CI 0.74-0.97). **Conclusion:** This study provides new data concerning future health aspects of women with a history of placental abruption. Lifestyle factors associated with increased risk of placental abruption may explain the findings of this study to some extent.

P122-1246
INTRAHEPATIC CHOLESTASIS OF PREGNANCY AND ASSOCIATED MATERNAL-FETAL MORBIDITY AND MORTALITY – EXPERIENCE OF SIX YEAR'S OF A TERCIARY HOSPITAL

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Problem statement: The intrahepatic cholestasis of pregnancy (ICP) has an estimated incidence of 0,1-16% and is characterized by generalized pruritus (including hand palms and feet soles) associated with elevation total serum bile acids levels (BAL) and/or aminotransferases, in the second and third trimester of the pregnancy. Its etiology is unknown and the main associated complications are: preterm delivery, intrapartum fetal distress and, rarely, fetal death. The latter seems to be associated with BAL 40µmol/L. Ursodeoxycholic acid is used as a therapy for pruritus control, BAL normalization and prognosis improvement. Many authors suggest the delivery schedule ≥36-37 weeks of gestation. The recurrence rate in a subsequent pregnancy is 60-70%. **Methods:** Retrospective descriptive study based on the analysis of the clinical processes of 47 pregnant women diagnosed with ICP in the last six years (2011-2016), at the Prof. Doctor Fernando Fonseca Hospital (Portugal, Lisbon). The analyzed variables were: antecedents of the pregnant woman, clinical condition associated with ICP, labour and data of the newborn. **Results:** In this period, there were 47 cases of ICP whose average age was 28,8 years old (20-42 years old). Regarding the personal history of the pregnant woman, 20 (42,6%) were multiparous, of whom 4 (8,5%) had a history of ICP. At the time of ICP diagnosis, mean gestational age was 31,8 weeks (22-40 weeks) and BAL 40,6µmol/L (10,8-180,1). Some 19 pregnant women (40,4%) BAL 40 µmol/L (40,4%), however, none were associated with fetal death. Concomitant to BA elevation, transaminases were elevated in 38 pregnant women (80,6%). Regarding delivery, the mean gestational age was 36,7 weeks (28-41 weeks). The cesarean delivery route occurred in 26 cases (53%), 16 (61,5%) of which in an emergency context due to a non-reassuring fetal state, suspected fetal-pelvic incompatibility or failure to induce labour. Concerning complications, there were: 17 preterm delivery (36,1%), whose average gestational age was 34,2 weeks (28-36); 10 cases of acute fetal distress (21,3%) and no cases of fetal death. All newborns presented an Apgar Index 7 at the fifth minute. **Conclusion:** The results obtained are mostly per the most recent literature: diagnosis predominantly in the third trimester, elevation of aminotransferases concomitant to that of BAL, delivery after 36 weeks per the gestational age at the time of diagnosis, preterm delivery and suffering fetal as more frequent complications and, finally, a non-negligible recurrence rate. However, no fetal death was observed even with high BAL values, which may be associated with an early intervention.

P123-1405
PRENATAL DIAGNOSIS - TURNER`S SYNDROME

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Problem statement: Turner syndrome (TS) is caused by the absence of the X chromosome (45XO) or by the presence of an abnormal or dysfunctional X chromosome. It is the most common genetic alteration in women, affecting about 1 in every 2000-5000 female newborns, although only 1% of fetuses with TS conclude gestation. It is the only chromosomal monosomy compatible with life. The diagnosis is made during adolescence, but may occur in the prenatal period because of an amniocentesis or to suggestive fetal ultrasound alterations: increased nuchal translucency, cervical cystic septum, fetal hydrops, shortening of the femur and cardiac malformations. Note that TS is not related to advanced maternal age. **Methods:** Presentation of a clinical case and review of the literature

regarding changes associated with TS in the prenatal period. **Results**: 34 years old, Caucasian pregnant, Gravida-3 Para-2 Abortus-0, with no personal or family history of relief. Pregnancy monitored from the first trimester, in which there were no analytical or ultrasound alterations (skull-caudal length of 46.1 mm, nuchal translucency of 1.40 mm, nose bones present). The combined biochemical screening of the first trimester was negative, with the premise that if the nuchal translucency was not considered, it would have been positive for the trisomy 21. In this context, it performed the integrated screening whose result was negative. On morphological ultrasound, at 20 weeks' gestation, there was edema at the nuchal, prefrontal and lower limbs, without other changes. In view of the ultrasound alterations visualized, he performed blood tests, fetal echocardiography and amniocentesis. Analytically, there were no parameters of recent viral infection. The initial fetal echocardiogram revealed three small ventricular septal defects and small pericardial effusion and, subsequently, only a predominance of the right cavities. The result of amniocentesis was: 45 XO - Turner Syndrome. The pregnant woman chose to keep the pregnancy. On ultrasound of the third trimester, at 30 weeks, the fetus maintained pre-frontal edema and in the lower limbs, although slight, and did not present other alterations. Eutocic delivery at 38 weeks - newborn with 2735g, Apgar Index 10/10/10, no apparent malformations or intercurrences. **Conclusion:** We describe a clinical case of TS diagnosed in the prenatal period in the context of ultrasound alterations. This case allows us to verify that although there is a wide spectrum of ultrasound manifestations associated with this syndrome, these can be severe and, consequently, it can be translated either at the level of the abortion rate (only 1% concludes gestation) or at the prognosis level after birth. The prenatal diagnosis of TS is important in that it allows to anticipate and guide all the clinic and psychosocial problems associated with it.

P124-1267
ARE THERE SOCIOECONOMIC STATUS DIFFERENCES IN SUCCESSFUL USE OF INFERTILITY TREATMENTS? RESULTS FROM A POPULATION-BASED STUDY ON PAROUS WOMEN

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Problem statement: Socioenomic status (SES) may play a role in determining infertility treatment use and success of infertility treatments, in the use of assisted reproduction technology. However, research results are conflicting, some findings conclude that SES is associated with types and outcomes of treatment, contradictory to studies finding no such connections. Infertility is an important health problem affecting up to 15% of women of reproductive age. The objective of this study was to examine any association between SES and successful infertility treatments (there is no available data on failed treatments) in infertile women. **Methods:** 7479 parous women aged 20 to 49 years were drawn from a representative population based survey of Norwegian women. Some 1168 women (15.6%) reported ever having infertility problems (tried for more than a year to get pregnant). 352 women (30.1%) had consulted a doctor and underwent hormonal therapy (HT) and 77 women (6.6%) in vitro fertilisation treatment (IVF data from Norwegian birth registry). SES was based on level of education and occupation, the most commonly used indicators of SES. SES differences between infertile women receiving fertility treatment and women not receiving any treatment and intragroup (women receiving treatments) differences were assessed by applying the chi-squared test. **Results:** Educaton proved to be a determinant of infertility problems, of all women did women having higher levels of educational achievement report more often infertility problems. There were no significant educational or occupational differences between infertile women receiving fertility treatments (HT and IVF) and women not needing any treatment to become mothers. Neither were there any significant intragroup SES differences between infertile women as to type of infertility treatment (HT and IVF). **Conclusion:** The study did not support research findings maintaining SES differences in infertility treatments. Although higher educated women were more likely to report infertility problems, there was no evidence that better educated women or women in higher occupational positions made different use of infertility treatments than lower SES women. Infertility treatments are funded differently in various countries, and the reported over-representation of women from higher SES is likely attributable to costs, reflecting greater ability to pay for treatments, thus financial barriers may be an important obstacle to equitable access to infertility treatments. Norway has public funding of treatments (limited number of IVF treatments), and and the cost of private infertility treatments are affordable. The study lends no support to the notion that there are differences in infertility treatments by SES.

P125-1215
THE EFFICIENCY OF ANTIANEMIC THERAPY BY MALTOFER IN THE PREVENTION OF OBSTETRIC AND PERINATAL COMPLICATIONS

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Problem statement: Currently, iron deficiency status is a nationwide problem of the health system in various countries, most often occurring among pregnant and young children. Per WHO, up to 20% of the world`s population suffers from iron deficiency anemia. It occurs in 20-30% of all women, 40-50% in fertile age, and 45-99% in pregnant women. Leading role in the treatment of anemia is played by iron preparations, which for decades of practical application have undergone a few changes. The efforts of researchers are aimed at increasing their therapeutic effectiveness, reducing the number and severity of side effects. The aim of the study was to prevent obstetric and perinatal complications of anemia from early pregnancy **Methods:** The study analyzed the course and outcome of the current pregnancy of 60 patients with anemia, depending on the start of treatment: 35, enrolled in 6-8 weeks. (I group) and 25 - in 20-25 weeks. Pregnancy (group II). **Results:** Clinical and statistical analysis of the state of somatic and reproductive health of the examined patients showed that in general the groups were comparable in terms of the main parameters analyzed. The age of the patients was between 22 and 37 years and was 27.5 ± 5.3 years. In the study of pregnancy, it was found that the risk of abortion significantly (p 0.05) was more common in group II (9%) than in I-10 (28.6%). In group II, the course of pregnancy was complicated by preeclampsia in 8 (32%) of the subjects, while in group I patients, preeclapmpsia was diagnosed in 4 (11.4%). Vaginally birth occurred in 29 (82.9%) in I and in 17 (68%) of women in group II. When studying the complications of labor, it was found that the overwhelming majority diagnosed premature discharge of amniotic fluid: in patients of the II group, this complication was significantly (P 0.05) more often 5 (20%) than in I - 2 (8%). Urgently cesarean was subjected to 8 patients (13.3% of the total number of operated), including Group I 3 (8.6%) and II - 5 (20%). In group I, in 3 (8.6%) patients the base for emergency delivery by cesarean section was decompensation of placental insufficiency. In group II, in 3 (12%) patients, decompensation of placental insufficiency served as the indication, in one (4%) - labor was complicated by primary weakness of labor activity, in one (4%) - clinical narrow pelvis. In 2 patients (5.7% of the total number of operated) group I and in 4 patients (16% of the total number of operated patients) of the II group, the cesarean section was performed in routinely (high degree myopia, retinopathy, incomplete uterus scar after cesarean section, relatively large fetal size with pelvic presentation). After anti-anemic therapy, the compensatory and protective capabilities of the fetus and the newborn improved, and this was reflected in a higher Apgar score. In newborns from mothers who received therapy from the second trimester, the Apgar score was 7.3 ± 1.4 points in the first minute of life, 7.7 ± 1.2 points in the fifth minute, while in newborns from mothers, received therapy from early pregnancy - at the first minute of life 7.8 ± 0.6 points, in the fifth minute 8.5 ± 0.7 points (p 0.05). The incidence of newborn asphyxia in the I group was (1.3%), and in II - (5.3%). **Conclusion:** Thus, the implementation of WHO recommendations on the prevention and treatment of anemia with the onset of the first trimester of pregnancy should be considered a reserve. Medication correction of interruption fetoplacental homeostasis in combination with anti-anemic treatment by Maltofer from early pregnancy has reduced the frequency of obstetric and perinatal complications. A convincing criterion for the effectiveness of the proposed measures was a decrease in the neonatal morbidity by a factor of 1.5.

P126-1216
PREVENTION OF PLACENTAL INSUFFICIENCY IN PREGNANT WOMEN WITH ANEMIA

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Problem statement: Anemia, it would seem, has long been known, comprehensively studied disease, but nevertheless, resistant to any methods of treatment, and the number of complications caused by it cannot be compared to any extragenital disease (EGS). This is probably due to both the duration of the effect of the anemia

syndrome, especially the preceding pregnancy, on the fetoplacental system (FPS) that is being formed, and the universality of the inadequate oxygen supply of all organs and systems of the woman, especially the uterus, placenta and fetus. The aim of the study was to evaluate the effectiveness of anti-anemic therapy in the prevention of placental insufficiency in the second trimester of pregnancy. **Methods:** The study analyzed the course and outcome of the present pregnancy in 40 patients in the II trimester with a verified diagnosis of iron deficiency anemia (IDA) who received anti-anemic therapy (Maltofer) in combination with preparations for the correction of placental insufficiency in the II trimester of pregnancy. **Results:** Anti-anemic therapy provided a significant (p 0.001) increase in the level of hemoglobin from 80.5 ± 1.6 g / l to 116.3 ± 1.9 g / l and erythrocytes - from 3.3 ± 0.4 1012 / l to 4, 2 ± 0.3 1012 / l. There was a significant increase in the serum iron level (from 11.5 ± 1.5 μmol / l to 17.5 ± 1.3 μmol / L) and a significant increase in the level of ferritin, which is possible only at the lowest rate of hemoglobin growth. The increase in serum ferritin level tended to exceed the background of treatment from 32.6 ± 1.2 μg / l to 34.5 ± 1.7 μg / l. No less interesting was the study of placental proteins in the blood of pregnant women. When prescribing therapy from early pregnancy, there was a significant (p 0.05) increase in TBG from 27.2 μg / ml to 68.5 μg / ml by 17-20 weeks. The dynamics of AMGF concentration changes in patients treated at an early age corresponded to those in uncomplicated pregnancy and if the AMGF values in this group did not reach the control values, they were significantly higher than in the representative group (40.1 g / ml and 36, 5ng / ml, respectively, in the control group - 43.2ng / ml). As for PAMG, because of early treatment, a significant decrease in the level of this protein was observed in comparison with the representative group from 35ng / ml to 17.4g / ml by the beginning of the second trimester. **Conclusion:** A pathogenetically substantiated complex of measures in 17-24 weeks of gestation, including medication correction of fetoplacental homeostasis disorders combined with anti-anemia treatment, made it possible not only to normalize iron parameters, improve the quality of life of pregnant women, but also to compensate for the insufficiency of the placental bed and placenta.

P127-1101
ASSISTED REPRODUCTIVE TECHNIQUES - AN OVERVIEW OF THE CURRENT METHODS AND TECHNOLOGY AVAILABLE

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Introduction: Since the first test tube baby was born in the year 1978, fertility treatments have advanced greatly. With the increasing age at which women now desire to start a family, Assisted Reproductive Techniques (ART) are becoming increasingly popular and it is currently estimated that a total of five million children have now been conceived through ART. This number is expected to rise and recent literature states that as many as one in six couple will now experience subfertility. Fertility treatments are complex and undergoing one cycle of ART involve various key steps from ovarian stimulation, follicle maturation, egg collection, in-vitro fertilisation to embryo transfer and eventual luteal phase support. These steps are highly complex and understanding the key concepts behind each step is key to a successful clinical pregnancy and eventual live birth. In this review, we aim to assess the various methods available for each step, compare them and summarise the evidence behind them. We also compared the costs associated with ART and further compare its cost globally. **Methods:** We performed a literature review of articles looking at the current methods and technologies involved in ART. We also looked at the published Cochrane reviews which analysed the efficacy of each method. This included Cochrane reviews which analysed the various stages of an ART cycle with the primary outcome of these reviews being a live birth. We also performed literature search and compared the cost benefit of various steps in an ART cycle and looked at the extent of public funding for an ART cycle and the factors that affect this. **Results:** This review allowed us to fully compare and summarise the various modalities available through Assisted Reproductive Technique. We reviewed various clinical review articles, analysed the results of Randomised Controlled trials and compared the current methods available. Through this poster, delegates will be able to learn about the ART, the methods available and understand the various steps involved in an Assisted Reproductive Technique cycle better. **Conclusion:** Subfertility is becoming a global issue with more and more couples seeking ART as a way to complete their family. It is therefore important for us to fully understand the various methods currently available so we can counsel our patients even better.

P128-1069
INFLUENCE OF ATOSIBAN THERAPY ON MATERNAL SERUM ELECTROLYTES

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Objective: The safety of atosiban has been tested in various aspects. The drug is known to have potential effect on the water resorption of the mother. However, whether this side effect occurs in the mother, has not been demonstrated yet in previous studies. The objective of this study is to evaluate the effect of atosiban therapy on maternal serum electrolytes which reflect changes in fluid volume. **Methods:** We retrospectively sampled data on 240 women hospitalized for preterm labor (24-35weeks' gestation) in our centers between 2011 and 2016. All patients were subjected to tocolysis with atosiban. Combination of other tocolytic drugs was inevitable to control uterine contraction. Routine laboratory tests (Complete Blood Count, Blood Chemistry, Urine analysis) were performed twice every week. Data were analyzed using IBM SPSS statistics (version 20), considering p 0.05 as significant. **Results:** We had 64 women treated with atosiban only, 16 treated with atosiban and ritodrine, 115 treated with atosiban and nifedipine, and 45 treated with atosiban, ritodrine, and nifedipine. In the multivariate logistic regression, the use of atosiban does not significantly change serum electrolytes level (Na, K, and Cl) (p =0.92, 0.74, and 0.93 respectively) and does not play any role in hemoglobin and hematocrit level changes. (p =0.12 and 0.41). Furthermore, concentration of urine was not influenced by the drug (p =0.60). **Conclusions:** We believe that the result of this study could provide more evidence on the safety of using atosiban tocolytic therapy in pregnancy with preterm labor.

P129-1256
BILATERAL PORT-SITE METASTASES FOLLOWING LAPAROSCOPY SURGERY FOR A STAGE 1B ADENOCARCINOMA OF UTERINE CERVIX WITH NEGATIVE LYMPH NODE

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Background: Port-site metastasis following laparoscopic surgery for malignancy is being recognized as a potential complication. Most cases occur after laparoscopy for a pelvic mass that subsequently proved to be malignant or in the case of a disseminated intraperitoneal disease. The rare cases of port-site metastasis following laparoscopy for endometrial and cervical cancer have been associated with the presence of regional lymph node metastasis or disseminated disease in the peritoneal cavity. We present a case report of bilateral port-site metastases in the absence of spread beyond the primary tumor. **Case:** A 53-year-old woman with stage IB1 adenocarcinoma of the cervix was treated with laparoscopic radical hysterectomy, bilateral salpingo-oophorectomy, pelvic and para-aortic lymph node dissection. There was no clinical evidence of metastatic disease and final pathology revealed an endocervical adenocarcinoma confined to the cervix with negative surgical margins and lymph nodes. Eleven months later, she re-presented with a palpable soft tissue mass in abdominal wall underlying the site of the prior laparoscopic trocar port. A cutaneous metastasis at the port-site was diagnosed. Following diagnosis of the port site metastasis, the patient was treated with concurrent chemoradiotherapy. **Conclusion:** This case demonstrates the potential for port-site metastasis in patient who underwent laparoscopic surgery with negative surgical margins, negative lymph nodes, and absence of intraperitoneal disease. All patients should be closely monitored for recurrent disease with long-term follow-up, including special attention to the port-sites.

P130-1385
PREGNANCY RATE ON BLASTOCYST VERSUS CLEAVAGE STAGE EMBRYO TRANSFER

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Problem: In Vitro Fertilization (IVF) is known as one of assisted reproduction methods that effectively addresses the problem of infertility. IVF fresh cycle pregnancy rate in Indonesia for age 35 years in 2013 was at 41.48%. It was still below the pregnancy rate of fresh IVF cycles at the same age worldwide in 2012, 46.6%. There

are several factors that can affect the pregnancy rate of IVF cycles, one of which is the stage when the embryo is transferred. Based on previous studies, it was found that the blastocyst stage has a higher pregnancy rate than the cleavage stage. The purpose of this study was to improve IVF effectiveness. **Methods**: The study was conducted using medical records from Klinik Yasmin RSCM Kencana. Samples were divided into two groups, 120 patients in cleavage stage group and 120 patients in blastocyst stage group. The samples were selected using systematic random sampling method. **Results**: In the analysis, we found 20,8% proportion difference between the blastocyst stage group to the cleavage stage group (50.8% and 30.0%; p = 0.006). In the multivariate analysis, it was found that there were three confounding variables, endometrial thickness, endometriosis, and tubal factor, which significantly affected pregnancy rate. **Conclusion**: Blastocyst embryo transfer have a significantly higher pregnancy rate than cleavage embryo transfer.

P131-1402
SPONTANEOUS RIB FRACTURE IN PREGNANCY - CASE REPORT

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Problem statement: There are few cases in literature that describe spontaneous bone fractures in pregnancy. Since it is a rare condition there is no recommended management during pregnancy and mostly includes individual approach. This condition can be chaleging for obstetricians regarding the way of delivery and possible more trauma to sceletal part of pelvis during delivery. **Methods and results:** We present a caseof 31- year old Caucasian secundiparous woman in week 34 of pregnancy who came to thephysical therapy specialist because she woke up with acute left costal pain. After examination, the ultrasound was made and showed 8th left rib fracture. Three days later after minimal movement, she experienced acute costal pain again, this time at the right side of thorax after which she came to Obstetrical unit in our Clinic. Ultrasound confirmed 8$^{th\ right}$ rib fracture as well. In patient's medical history there were no fractures. She had idiopatic hyperprolacinemia for last three years without therapy. She had no headaches or vision problems and MRI of the head showed no pathology. There was no pathology in previous pregnancy, but patient reported sudden loss of four teeth in early postpartal period. There is no osteoporosis in family history. Due to the spontaneous bilateral rib fracture, laboratory test was done and showed normal calcium serum level- 2,22mmol/L and normal phosphorus level- 0,27Mmol/L, but hypercalciuria- 8,7 mmol/24h was found. Patient's 25-hydroxyvitamin D level was low- 43,3nmol/L and parathyroid hormone was 4,1 pmol/L which is a normal level. Examination and normal levels of thyroid- stimulating hormone and cortisol ruled out hyperthyroidism and Cushing 's syndrome, and diagnosis of osteoporosis in pregnancy was designated. Patient was treated with CaCO3 – 1g per day and D3 drops 4000 IU till the end of pregnancy. She had spontaneous vaginal delivery. After that there were no more fractures in pregnancy, delivery or postpartum period. **Conclusion:** Postpartal period teeth loss after first pregnancy could have been the first symptom of pregnancy induced calcium loos and should have been investigated during that time. Regardless to that if there is a pregnant patient with acute thoracic or spine pain, pregnancy associated osteoporosis should be suspected, especially if previous anamnestic data suggest the presence of risk factors. Immediate treatment is needed to avoid potential complications during the delivery.

P132-1538
CELL- FREE DNA TESTING: INFLUENCE ON THE COMBINED SCREENING FOR FETAL ANEUPLOIDIES IN THE FIRST TRIMESTER AND THE RATE OF INVASIVE PROCEDURES

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We present the results of prenatal cf-DNA testing in the period from 1. 1. 2013 until 30. 6. 2017 in a private outpatient clinic. In our study, all of 9426 pregnant women had NT screening. Among them, 388 had also prenatal cf-DNA testing. **Results:** The number of women having NT screening and adding cf-DNA testing has increased over the last 4 years (2013: 39, 2014: 70, 2015: 48, 2016: 157). The percentage of women with cf-DNA testing among the ones with NT screening raised from 1.45 % in 2013 to 9.13 % in 2016 (2014: 2.85 %, 2015: 2.74 %). For women that are HR only due to their age (37 years or more), this percentage increased from 13.38 % in 2013 to 44.03 % in 2016. Among women that are HR for T21 due to both age and prior NT screening, 5.65 % decided to undergo cf-DNA testing in 2013 and 46.30 % in 2016. In 2016, 4.24 % of women younger than 37 years decided for cf-DNA testing regardless of low risk NT screening result for T21, whereas this percentage was equal to 0.58 % in 2013. Cf-DNA test after NT screening has changed women's decision for adding biochemistry test as a part of traditional screening tool. The percentage of women with combined test among women with NT screening has remained around 30 % throughout the years. The main difference over the years has appeared among women older than 35 years. In the group of 35 – 37 years old women, this percentage decreased from 82.86 % in 2013 to 57.69 % in 2016. Among women of age 37 years or more with NT screening, 48.00 % had also biochemistry test in 2013 and 23.94 % decided for it in 2016. The average age of women with cf-DNA testing has been similar in the last 4 years (2013: 36.7 years, 2014: 36.5 years, 2015: 36.6 years and 2016: 36.2 years). In the period 2013 – 2016, half of our cf-DNA tests were performed in 2016. Out of total 157 women with cf-DNA tests in 2016, 84 (35.50 %) were of advanced maternal age (37 years or more), 36 (22.93 %) were HR for T21 based on prior screening, 59 (37.58 %) were HR regarding age but low risk according to prior screening, 62 (39.49 %) had low risk regarding age and prior screening. The number of invasive procedures in Slovenia is still high due to well-established NT screening performed from year 1998 on. The percentage of women with invasive procedures among the ones with NT screening was 5.71 % in 2013, 5.30 % in 2014 and 4.99 % in 2015. However, this percentage decreased over the years in two age groups: for women of age 35 – 37 years it was 9.66 % in 2013 and 5.81 % in 2015, for women aged 37 years or more it was 37.24 % in 2013 compared to 30.58% in 2015. We are still waiting for the data from year 2016, when our percentage of cf-DNA testing among the ones with NT was the highest. We expect further decrease in percentage of invasive procedures among the ones with NT screening. In general, cf-DNA testing for all aneuploidies yielded 100 % sensitivity (95 % CI: 63.06 % – 100 %) and 99.66 % specificity (95 % CI: 98.14 % – 99.99 %) with the positive predictive value of 88.89 % (95% CI: 51.75 % – 99.72 %). Sensitivity and specificity for only T21 are 100 %. **Conclusions:** Our results confirmed that prenatal cf-DNA testing represents highly accurate approach in advanced screening of most common aneuploidies. The number and percentage of tests has been increasing. The average age of women with cf-DNA testing remains similar throughout the years. The expected decline in number of invasive procedures among HR pregnant women due to their age and/or prior NT screening results is to be continued. However, the ultrasound evaluation of the fetus determines which further test or procedure will follow.

P133-1322
HYDRAMNIOS IN SINGLETON PREGNACIES AND PERINATAL OUTCOMES

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Problem statement: Hydramnios is defined as an excessive accumulation of amniotic fluid in pregnancy and it has been associated with increased risk of perinatal morbidity and mortality, including preterm delivery, aneuploidy, caesarean delivery, fetal anomalies, premature rupture of membranes (PROM), abnormal fetal presentation, cord prolapse and postpartum haemorrhage, and perinatal mortality. The earlier hydramnios occurs in pregnancy and the greater is the amount of fluid, the higher is the risk of perinatal morbidity and mortality. Many clinicians have viewed hydramnios as a prognostic factor of increased risk of pregnancy complications and have recommended an extensive evaluation of these pregnancies, including multiple comprehensive ultrasound examinations, repeat diabetes screening and amniocentesis for fetal karyotyping. There is a significant positive relation with maternal age, diabetes, fetal anomalies and fetal macrosomia. The aim of our study was to evaluate the association between idiopathic hydramnios and adverse perinatal and obstetric outcomes. **Methods:** A retrospective cohort study was performed between 1 January 2007 and 31 December 2016 on 114 pregnant women with idiopathic polyhydramnios (study group) and 150 normal pregnant women (control group) attending the outpatient department of General Hospital of Chania. The inclusion criteria were singleton pregnancy, at least 20 weeks of gestation, fetus with no chromosomal and structural abnormalities, non-diabetic, TORCH screen negative and no Rhesus factor (Rh) isoimmunisation. The exclusion criteria for the study were multiple

pregnancies, fetus with chromosomal and structural abnormalities, pre-existing or gestational diabetes, TORCH screen positive, Rh isoimmunisation and oligohydramnios. Associated obstetrical complications like gestational hypertension, preeclampsia, preterm labor, premature rupture of membranes (PROM), malpresentations, abruptio placenta and postpartum hemorrhage were recorded in both the study and the control groups. **Results:** We study 114 cases with idiopathic hydramnios, with maximum cases were diagnosed between 28 and 36 weeks of pregnancy (84.6%) and maximum presented with mild hydramnios (82%, AFI 24.0-30.0 cm). In the study and control groups, there were no significant differences in preeclampsia and gestational hypertension. In the study and control groups, 64.6 and 69.6% women, respectively, had normal vaginal delivery. The study group recorded much higher number of preterm deliveries than the control group (54%). In the study group, 51.8% women had maternal complications, while in the control group, 13.6% women had obstetrical complications. The study group recorded higher perinatal mortality (2.6%) than the control group. **Conclusion**: Although maximum cases of idiopathic hydramnios are mild size and detected in later gestations, there is a high incidence of obstetrical complications and poor neonatal outcome associated with it compared with normal pregnancies. Thus, we believe that idiopathic hydramnios is an independent risk factor for perinatal morbidity and mortality.

P134-1324
WOMEN'S CERVICAL HPV INFECTION IN RURAL GREECE

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Problem statement: It is established that human papillomavirus (HPV) infection is the main cause of cervical cancer. HPVs are classified as high-risk (HR) or low-risk (LR) types depending on their carcinogenic potential. There is limited knowledge of HPV distribution in the general population of Greece, especially in the rural regions, knowledge that will help to develop national cervical cancer preventive strategies. We aimed to determine the overall and type-specific prevalence of cervical HPV infection and the association of such infection with cervical cytology abnormalities and sociodemographic characteristics among women living in rural Greece. **Methods:** The study was conducted during January 2016 to June 2017 in the regional unit of Chania with a population of 160.000 residents. Nonpregnant women, age ≥13 years old, who were residing in the study area during the study period, were considered eligible. Basic demographic information, sociodemographic characteristics, medical history, smoking status, alcohol consumption, sexual and reproductive behavior, age at first sex, number of lifetime partners, history of sexually transmitted infections, and use of a condom was obtained at the time of the gynecological visit. **Results:** Among women in whom a valid HPV result was obtained the median age was 40 years (range 13-75 years). Condom was the most common contraceptive method ever used (60.8%), while 29.4% did not use any contraceptive method. Of the HPV-positive women, 23.5% had a history of a previous HPV infection and 31.9% a history of sexually transmitted disease. 14.7% had never done a Pap test, while 68.8% had a Pap test during the last year. Overall, the HPV prevalence was 15.6%, 8.2% for high-risk and 7.4% for low-risk HPV types, and was similar between age groups. The five most common HR types were HPV-18 (3.2%), HPV-33 (1.9%), HPV-56 (1.4%), HPV-31 (1.1%), and HPV-16 (0.9%). Among LR types, HPV-11 was most common (4.1%) and 2.2% of women had infection with multiple HPV types. Among the women with normal cytology, the prevalence of HR-HPV (8.2%) and LR-HPV infection (8.1%) was similar. Among women with abnormal cytology, 8.9% had HR-HPV infection and 5.3% had LR-HPV infection. The proportion having abnormal cytology did not significantly differ between women with HR- and LR-HPV. HPV infection was associated with current smoking, formal education and multiple sexual partners. **Conclusion:** The prevalence of HPV in women attending our clinic is high showing the importance of the early screening as well as the necessity of preventive measures. The number of sexual partners and smoke consumption were the most significant risk factors for HPV infection, followed by young age and lower income. Since, the vaccine against the most prevalent and high-risk HPV subtypes is in use, that might help to reduce the risk of infection and cervical cancer. However, larger epidemiological studies in different regions of our country are needed to report the accurate prevalence of HPV infection.

P135-1295
SERUM INHIBIN-B LEVEL DURING OVUM PICK-UP AS A BIOCHEMICAL PREDICTOR FOR OOCYTE QUALITY IN IVF CYCLE

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Background: The outcome of an in vitro fertilization (IVF) cycle will be determined by several factors including oocyte quality. Inhibin-B has a predicting value for follicular development and a predictor of embryo quality. The objective of this study was to investigate the association between serum inhibin-B level with the number of picked-up oocyte, mature oocyte, and fertilization rate in IVF cycle and to determine their cut-off levels. **Materials and methods:** An analytic cross-sectional study was conducted from September 2013 until August 2014 at Harapan Kita Mother and Chil-dren Hospital Jakarta. A total of 38 infertile women undergoing controlled ovarian stimulation for IVF cycles were measured for serum inhibin-B levels at basal, trigger, and ovum pick-up (OPU) times. The receiver operating characteristic analysis (ROC curve) was used to determined the cut off-level of serum inhibin-B to predict the number of picked-up oocyte (>3 oocytes), mature oocyte (>3 oocytes), and fertilization rate (>70%). **Results:** The median level of inhibin-B during OPU was 196.31 pg/ml and it was significantly correlated with the number of picked-up oocyte (p=0.017), mature oocyte (p=0.005), and fertilization rate (p=0.021). Serum inhibin-B level during OPU ≥ 131.17 pg/ml was moderately accurate to predict the number of picked up oocyte of more than 3 oocytes (AUC 0.75, sensitivity 81.5%, specificity 72.7%) and the number of mature oocyte of more than 3 oocytes (AUC 0.77, sensitivity 84.0%, specificity 69.2%). Serum inhibin-B level during OPU ≥ 86.84 pg/ml was also moderately accurate to predict fertilization rate >70% (AUC 0.74, sensitivity 88.9%, specificity 63.6%). **Conclusions:** Serum inhibin-B level during OPU was associated with the number of picked-up oocyte, mature oocyte, and fertilization rate in IVF cycle. The cut-off levels were moderately accurate to predict several parameters of oocyte quality.

P136-1268
IMPACT OF IMMUNE DYSFUNCTION AND STRESS RELATED DISORDERS IN ENDOMETRIOSIS – A CASE-CONTROL STUDY

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Problem statement: Endometriosis has been linked to significant emotional distress. Nevertheless, the pathophysiology of this gynecological condition is not yet established and the contribution of higher stress levels is not clear enough. Moreover, women with endometriosis are at increased risk for second disease as chronic fatigue syndrome, multiple sclerosis, lupus, rheumatoid arthritis and other autoimmune inflammatory related disorders. Allergies, asthma and eczema has been also reported as more prevalent among endometriosis patients. **Methods:** A case-control study of 418 medical files of patients with surgical-diagnosed endometriosis treated and followed at Gynaecology Department of Coimbra University Hospital Center was designed to study the prevalence of auto-immune diseases, stress-related disorders, specific allergies and educational level. Control group included 300 age-stratified healthy women participating in a family planning programme. Statistical analysis was performed using SPSS 20.0 (p0.05). **Results:** The average age at the time of endometriosis diagnosis was 37.2±8.1 years and body mass index was lower among endometriosis group (p0.001). Clinical reports included 44 (10,7%) endometriosis patients that reported auto-immune diseases, 53 (12.9%) with severe allergies and 90 (21.9%) suffering from depression, anxiety or fibromyalgia. Women with endometriosis were significantly more likely to have higher educational level and severe allergies (p0.001) when compared to control group but no significant differences were observed when comparing auto-immune diseases or stress-related disorders. **Conclusion:** We observed a possible link between endometriosis and higher educational level and severe allergies. Stress can lead to an immune dysfunction, promoting a favorable inflammatory environment for endometriotic implants survival and growth. However, we found no significant difference on what concerns autoimmune diseases or stress-related disorders.

Further studies should be designed to confirm these results.

P137-1260
OVARIAN ENDOMETRIOMAS AND PERITONEAL ENDOMETRIOSIS – DIFFERENT CLINICAL IMPLICATIONS OF THE DISEASE

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Problem statement: Isolated ovarian endometriomas and peritoneal endometriotic disease are believed to be different expressions of the same etiopathogenic entity. Nevertheless, clinical signs and symptoms, clinical and imagiologic diagnosis, and treatment options usually require individualization per two main consequent disorders: pain severity and infertility. Determining clinical features of patients with both types of endometriosis can be useful in understanding different outcomes between ovarian endometriomas and peritoneal endometriosis. **Methods**: A cross-sectional study including 383 patients submitted to pelvic surgery and corresponding histologic diagnosis of endometriosis was performed at the Gynecology Department of Coimbra University Hospital Center to analyze and compare clinical parameters between two groups: patients with isolated ovarian endometriomas and patients with diffuse peritoneal endometriosis. Statistical analysis was performed using SPSS 20.0 (p0.05). **Results**: The average age of diagnosis in both groups was 36,8±8,0 years and pain symptoms were common among all endometriosis patients as 64% referred dysmenorrhea, 56% chronic pelvic pain and 31% dyspareunia. Incidence of isolated ovarian endometriomas was 22% (78 patients) and remaining 78% (281 patients) presented peritoneal diffuse endometriosis with or without endometriomas. Clinical symptoms, specifically on what concerns associated pain complaints, were similar between both groups (p=n.s.). Incidence of infertility was significantly higher in peritoneal endometriosis group (p0.001), unlike CA-125 serum values, which were significantly higher in isolated ovarian endometriomas group (p0.01). There was no significant difference between both groups on what concerns age at diagnosis, body mass index, age at menarche, menstrual pattern (cycle length and duration of flow), obstetric or abdominal surgery personal background. **Conclusion:** Isolated ovarian endometriomas and peritoneal endometriosis were similarly associated to pain complaints, most importantly chronic pelvic pain and acute cyclic pain. Despite ovarian endometriomas label the disease to advanced stages, peritoneal endometriosis was related to more severe consequences, regarding infertility. Significant elevated CA-125 levels in isolated ovarian endometriomas compared to peritoneal endometriosis is an interesting observation regarding endometriotic and clear cell ovarian cancer carcinogenesis.

P138-1338
FINAL OOCYTE MATURATION IN NORMORESPONDER PATIENTS UNDERGOING INTRACYTOPLASMIC SPERM INJECTION: GNRH AGONIST VS. DUAL VS. RHCG

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Problem Statement: Evidence suggests that GnRH agonist as a final oocyte maturation trigger in fresh autologous cycles is associated with a lower live birth rate, a lower ongoing pregnancy rate and a higher rate of miscarriage. GnRH agonist as an oocyte maturation trigger could be useful in terms of preventing ovarian hyperstimulation syndrome in hyperresponder patients. However, there's not enough evidence regarding the impact of dual trigger or GnRH agonist trigger in normoresponder patients. The aim of the present study was to investigate if there's a difference between cycle outcomes of normoresponder patients who were triggered by GnRH agonist alone or GnRH agonist+hCG or hCG alone? **Methods:** In this retrospective cohort study data of normal responder patients who were treated by antagonist co-treated ICSI at a university-based infertility clinic between January 2016 and December 2016 were reviewed (n=200). The first study group consisted of cycles triggered by GnRH agonist alone. The second study group consisted of cycles triggered by both GnRH agonist and recombinant hCG (dual trigger). And the control group consisted of cycles triggered by recombinant hCG alone. There were 56 cycles in the GnRH agonist trigger group, 59 patients in the dual trigger group, and 85 patients in the hCG trigger group. The main outcome parameter was ongoing pregnancy rate. Demographic parameters, cycle characteristics and cycle outcome were compared between the groups. Continuous variables were analysed independently by Oneway ANOVA test and categorical variables were compared by using Fisher's exact test. **Results:** There were no statistically significant differences between the study and control groups regarding age, body mass index, duration of infertility, etiology of infertility, and baseline hormonal status. Regarding the cycle characteristics total dose of gonadotropins, duration of ovulation stimulation, maximum estradiol levels, number of oocytes retrieved, MII and fertilization rates were comparable between the groups. The number of transferred embryos were 1.1±0.7, 1.2±0.6, and 1.2±0.5, respectively. The total number of good quality embryos were 3.2±2.9 in GnRH agonist trigger, 4.4±3.2 in dual trigger, and 2.9±2.1 in hCG trigger (P=0.014). The significance stems from the difference between dual trigger and hCG trigger (P=0.011). The cycle cancellation rates were 17.9% for GnRH agonist trigger, 10.2% for dual trigger, and 4.7% for hCG trigger (P=0.039). The ongoing pregnancy rates were 21.4% for GnRH agonist trigger, 30.5% for dual trigger, and 28.2% for hCG trigger (P=0.126). **Conclusion:** Our results suggest that GnRH agonist or dual or hCG triggering have similar outcome in terms of ongoing pregnancy in normoresponder patients. However, dual trigger results in more good quality embryos and GnRH agonist trigger results in more cycle cancellations. Further randomized controlled studies are needed to confirm our findings.

P139-1033
MACROPHAGE COLONY-STIMULATING FACTOR (M-CSF) INTERMEDIATELY PARTICIPATING IN THE PROCESS OF LUTEINIZING HORMONE-INDUCED NATRIURETIC PEPTIDE RECEPTOR 2 (NPR2) DECREASE AND OOCYTE MEIOTIC RESUMPTION

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Problem statement: Luteinizing hormone (LH) regulation of the ligand natriuretic peptide precursor type C and its receptor natriuretic peptide receptor 2 (NPR2) is critical for oocyte maturation. But the mechanism is not fully understood. Macrophage colony-stimulating factor (M-CSF) has recently been demonstrated to be involved in the processes of oocyte maturation and ovulation. **Methods:** We explored the effect of M-CSF in the LH-induced regulation of oocyte meiosis using immature female C57BL/6 mice. Mice were injected i.p. with 5 IU of equine chorionic gonadotropin (eCG) to stimulate follicle development. After 44-48 h, the eCG-stimulated mice were next injected i.p. with an ovulatory dose of 5 IU human chorionic gonadotropin (hCG). Ovaries were excised at selected times. Pre-ovulatory follicles (POFs) and cumulus-oocyte complexes were cultured in different medium. Immunohistochemical analysis and quantitative real-time PCR analysis were used to assess the expression of M-CSF, M-CSF receptor (M-CSF-R), and NPR2. The presence of germinal vesicle breakdown (GVBD) was examined under a stereomicroscope to morphologically evaluate the meiosis resumption of oocytes. **Results:** NPR2 was mainly expressed in cumulus cells of POFs, while M-CSF and M-CSF-R were expressed in both mural granulosa cells and cumulus cells. The levels of M-CSF/M-CSF-R and NPR2 decreased within 4 h after hCG treatment. M-CSF not only reduced the expression of NPR2 mRNA via its receptor M-CSF-R, but also increased the proportion of GVBD of oocyte. **Conclusion:** M-CSF plays the role of an intermediate signal, inducing a vital decrease in NPR2 levels in cumulus cells, and regulates the process of LH-induced meiotic resumption.

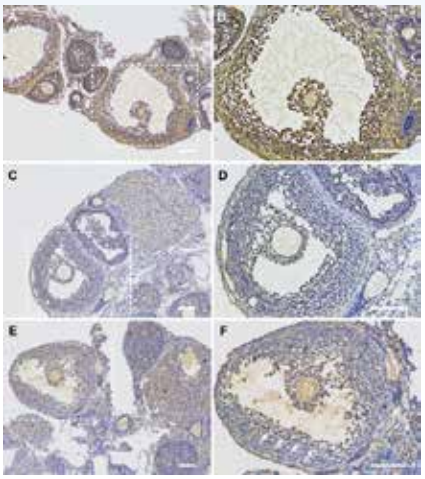

Figure 1. Expression patterns of M-CSF, M-CSF-R and NPR2 in the ovaries of eCG-stimulated mice. Localization of M-CSF (A and B), M-CSF-R (C and D) and NPR2 (E and F) was analyzed using immunohistochemistry. White arrows, periantral mural GCs. Scale bar, 100 μm

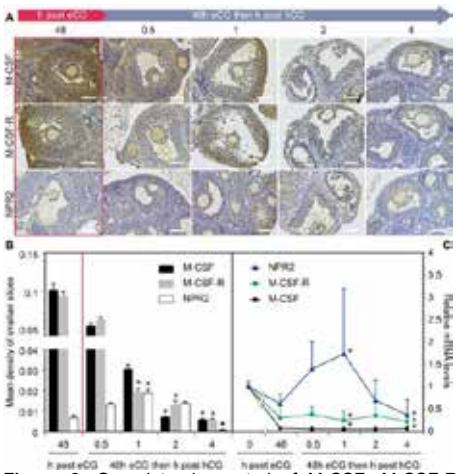

Figure 2. Gonadotropin control of M-CSF, M-CSF-R and NPR2 expression in ovaries in vivo. (A) Localization of M-CSF, M-CSF-R and NPR2 in ovarian follicles shown with immunohistochemistry. Red box represents the time point of 48 h after eCG treatment. Scale bars, 100 μm. (B) Mean optical density of ovarian slides. *, *P* .05; ▲, *PP*

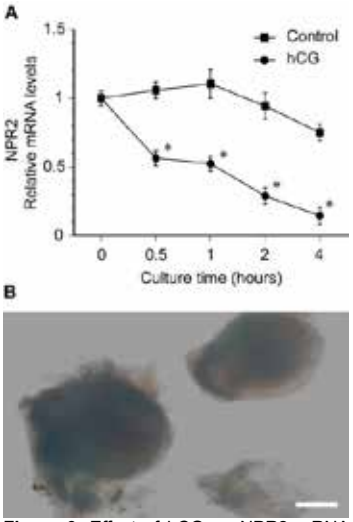

Figure 3. Effect of hCG on NPR2 mRNA expression in POFs. (A) The kinetics of hCG-induced NPR2 mRNA levels in POFs. *, *P*

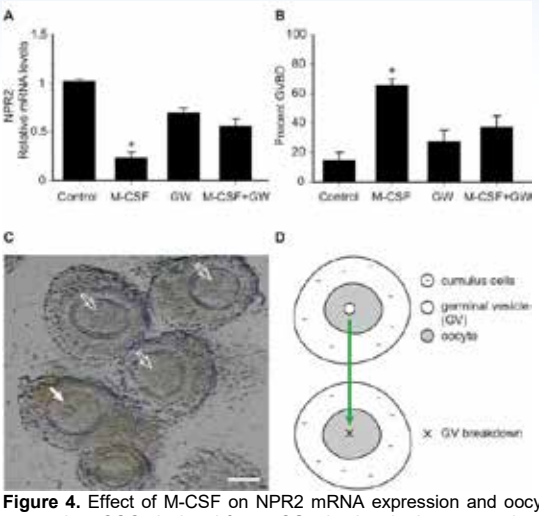

Figure 4. Effect of M-CSF on NPR2 mRNA expression and oocyte maturation. COCs isolated from eCG-stimulated mice were cultured in MEM-α in the existence of 30 nM NPPC (control) added with 200ng/ml M-CSF and/or 1μmol/L GW2580 for 2 h. (A) Effect of GW2580 on M-CSF-induced NPR2 mRNA levels in cumulus cells after 2 h of culture. *, *P* P

P140-1125
POST-CESAREAN PAIN ASSOCIATED WITH SKIN INCISION: VERTICAL VERSUS PFANNENSTIEL

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Objective: The purpose of this study was to determine post-cesarean pain in elective vertical cesarean delivery compared to Pfannenstiel incision. **Material and Methods:** This was the secondary data analysis from the primary study investigating the additional post-cesarean analgesia between ketorolac and meperidine. Parturients who had scheduled for elective cesarean delivery were recruited. All parturients underwent elective cesarean section via spinal anesthesia. Visual analogue scale (VAS) was used to evaluate postoperative pain at 3, 6, 12 and 24 hours. Rescue analgesia using either ketorolac or meperidine was applied when VAS was equal or more than 6. Type of skin incision was re-analyzed and compared to other parameters. **Results:** A total of 580 pregnant women were recruited in this study. There were 276 and 304 cases in vertical and Pfannenstiel groups, respectively. Both groups showed no statistical significant among body mass index, parity, gestation age, estimated blood loss, birth weight, history of prior cesarean delivery and underlying diseases. In primary cesarean delivery, VAS of vertical group was higher than Pfannenstiel group at 3, 12 and 24 hours after surgery. In repeated cesarean delivery, VAS of Pfannenstiel group was higher than vertical group at 6 and 12 hours after operation. There was no side effect, i.e., nausea, vomiting, itching, respiratory depression and allergic reactions, in this study. **Conclusion:** The postoperative pain after elective cesarean delivery of both vertical and Pfannenstiel incision were comparable.
Keyword: cesarean section, vertical incision, Pfannenstiel incision, pai

P141-1161
DECREASED PREGNANCY RATE AFTER IN-VITRO FERTILIZATION IN HIV-INFECTED WOMEN

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The goal of the study: The goal of the study was to evaluate clinical and laboratory characteristics and efficacy of ART in female HIV-infected patients. **Materials and methods:** Thirty-eight HIV-infected female patients (main group) and 56 HIV-seronegative women (control group) were enrolled into a prospective case-control study. Seventy-four in vitro fertilization (IVF) cycles, including 44 treatment cycles and 30 cryo-cycles, were conducted in the main group. The respective numbers of cycles in the control group were 59 and 30. Stimulation of superovulation was performed per long IVF protocols and GnRH-antagonist-based protocols using recombinant FSH and hMG. While preparing the endometrium in cryocycles, natural estrogen- and micronized progesterone-containing medications were used. The infectious status of the patients was assessed based on the data on the disease stage, viral load, CD4+ count and the duration of ARV therapy. **Results of the study:** The patients in both groups were comparable in respect of age (median age - 34 and 32 years; p=0.160). The duration of HIV-infection was 10 years (interquartile range 6-13 years); most of the patients had the third subclinical stage of the disease (68.4%). The patients with stages 4a (23.6%), 4b (5.3%) or 4c (2.6%) were in the remission period of the disease. All females were receiving combination ARV therapy, including 37 patients receiving NRTI in combination with PI and one patient was receiving NRTI + NNRTI. Median duration of therapy was 4 years (2 - 6.2 years). Viral load before initiation of the IVF program was undetectable in 100% cases. Median CD4+ count was 625.5 cells/μL (412.7 - 815.5). The patients in the main and control group were comparable in respect of duration and the factor of infertility - both groups had tubal-peritoneal factor as the most prevalent infertility cause (39.5 and 30.4%, p=0.467). Most HIV-infected women had secondary infertility (76.3% and 35.7%; p=0.0001). The most frequent types of gynecologic pathology in HIV-infected females were cervix disorders (28.9%) and chronic salpingo-oophoritis (28.9%), which was comparable to the control group. However, complicated forms of uterine appendages inflammatory disorders were observed only in the main group (7.9%). History of sexually transmitted infections (syphilis, chlamydia infection) was reported in 11 (28.9%) and 3 (5.3%) of HIV-infected females and women without HIV-infection, respectively (p=0.001). History of pelvic surgery was reported in 27 (71%) and 31 (55.4%) of HIV-infected females in the main group and women in the control group, respectively (p=0.036). In both groups, the most prevalent type of surgery was tubectomy, and its frequency was higher in HIV-infected women (47.3% versus 30.4%, p=0.046). The frequency of ovarian surgery was comparable in both groups (13.1 versus 14.2%, p=0.429). AMH concentration was significantly lower (1.86 ng/mL versus 3.2 ng/mL; p=0.024), while FSH levels were statistically significantly higher (7.9 IU/L and 6.3 IU/L; p=0.013) in HIV-infected females compared to HIV-seronegative patients. Analysis of the parameters of IVF stimulation cycles did not reveal any significant differences in the initial or total doses of gonadotropins or duration of stimulation in both groups. However, lower number of oocytes (8.86±1.1 vs 12.9±0.8; p=0.001), mature oocytes (7.45±0.9 vs 10.1±0.6; p=0.003), zygotes (5.88±0.7 vs 8.4±0.001; p=0.001), cleavage stage embryos (5.55±0.6 vs 8.1±0.4;p=0.001) and blastocysts (2.68±0.5 vs 4.4±0.4; 0.009) were recovered from HIV-infected patients compared to control group. Selective embryo transfer was conducted on the third or fifth days of culture in both groups. Lower frequency of clinical pregnancy was revealed in HIV-infected females compared to HIV-seronegative women both during treatment cycles of ART (13.8% vs 40.4%; p=0.014) and cryo-cycles (20% vs 53.6%; p=0.008). **Conclusion:** Lower efficacy of ART programs was demonstrated in HIV-infected women, which can be either due to the influence of the infection itself on the reproductive function, or the effects of ARV therapy, as well as the effects of other factors, which require further research.

P142-1422
RECURRENT GESTATIONAL HYPERTRIGLYCERIDEMIA INDUCED PANCREATITIS IN PREGNANCY

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Problem statement: Gestational hypertriglyceridemia is a rare but potentially serious condition in pregnancy. It can lead to acute pancreatitis with high maternal and fetal morbidity and mortality. It is associated with preterm delivery and has a high recurrence rate in subsequent pregnancies. **Methods:** We present a case report of a patient with recurrent gestational hypertriglyceridemia leading to acute pancreatitis in pregnancy. We also performed a literature review, establishing current management strategies in index and subsequent pregnancies to minimize maternal and fetal complications. **Results:** The data on efficacy and safety of common treatment modalities in the non-pregnant patient is scarce in the pregnant population. Most of the current recommendations are based on observational data from small case series or case reports. **Conclusion:** Due to the rarity of the above condition, no established treatment protocols are available. Several different approaches have been postulated by different groups. Our review aims to surmise these strategies to guide clinicians in their management of gestational hypertriglyceridemia and their subsequent pregnancies.

P143-1131
VITAMIN D AND ASSISTED REPRODUCTION TECHNOLOGIES: VITAMIN D LEVELS AND FROZEN TRANSFER EMBRYO (FET)

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Vitamin D status influences female reproductive and pregnancy outcomes. Vitamin D deficiency is more common in younger women and higher BMI. There is some evidence that in addition to sex steroid hormones, the classic regulators of human reproduction, vitamin D also modulates reproductive processes in women and men. Human and animal data suggest that low vitamin D status is associated with impaired fertility, endometriosis and polycystic ovary syndrome. Clinical researchs involving human subject are limited. However, further evidence supporting an association between vitamin D and reproduction comes from studies of the vitamin D receptor. Vitamin D receptors are present in many organs of the body, including the ovaries (especially on granulosa cells), endometrium, and the placenta. The role of vitamin D in steroidogenesis of sex hormones (estradiol and progesterone) in healthy women and vitamin D also has effect on implantation. The association of vitamin D insufficiency and the prevalence of pregnancy. Vitamin D levels are significantly associated with components of the MS and insulin resistance in women with polycystic ovary syndrome (PCOS) and undergoing IVF. In US, several studies have shown an increase level of IVF outcomes in women with sufficient vitamin D as higher clinical pregnancy rate and higher implantation rate in Whites. In this study, we assessed the relationship serum levels of vitamin D 25 (OH) and clinical pregnancy rates in frozen embryo transfer of 124 infertile women undergoing IVF frozen transfer in Viet Nam. Serum levels of vitamin D (25OH-D) were measured in the second day of menstrual cycle before endometrial preparation .25 (OH) D is measured on the second day of the freezing cycle, before beginning the endometrial preparation. All participants in the final analysis were grouped per the standard of Vitamin D status, three groups. There were no differences in study population characteristics. The result of our study demonstrated no significant difference in the pregnancy rates and implantation rates between the three vitamin D groups after frozen embryo transfer (p 0.05). The limitations of the study: research design, insufficient sample size, Assessing the pregnancy rate is influenced by multifaceted and multiple confounding variables. The current studies on Vitamin D are available in the population of Western Countries. Further research is needed, which in turn can find meaningful differences among Asians in general and Vietnamese.

P144-1258
POSTPARTUM MATERNAL HEMODYNAMICS AFTER NORMAL DELIVERY, PREECLAMPSIA AND ECLAMPSIA: A PROSPECTIVE STUDY

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The objective: The aim of this study is to assess maternal hemodynamics immediately in the postpartum period, and also after 2 and 6 months, in the parturients who were diagnosed with preeclampsia and eclampsia and to evaluate the long- term risks of developing heart dysfunction, heart failure, and vascular diseases. **Design**: Prospective observational case-control study. **Population:** 90 postpartum women after mild and severe preeclampsia and eclampsia (main group) and 55 patients after an uncomplicated

pregnancy (control group). The parameters of maternal hemodynamics were recorded on 1,3,5,9,14-day postpartum period, as well as after 2 and 6 months after delivery. Indicators of the control group compared with the hemodynamic parameters in nonpregnant patients of reproductive age without somatic diseases (30 cases). **Methods:** The following indicators were assessed by echocardiography: end-systolic volume (ESV), end-diastolic (EDV), stroke volume (SV), cardiac output (CO), stroke index (SI) and cardiac index (CI), mean velocity of circumferential fiber shortening (MVCF), heart rate (HR), mean blood pressure (MBP) and systemic vascular resistance (SVR). Blood flow in renal and carotid arteries as well as theirs branches, we evaluate using Doppler blood flow calculating resistance index (IR) and the pulsation index (PI). **Results:** After uncomplicated pregnancy on the third day we observed increase in the cardiac parameters (SV, CO, SI, CI) and the simultaneous decrease in SVR demostratedby reduction in vascular resistance in carotid, ophthalmic and renal arteries as compared to non-pregnant patients (P0.05). All indicators returned to normal by the end of postpartum period. After PE and eclampsia on 1-3 days after labor indicators of cardiac hemodynamics were significantly lower, SVR and the cerebral and renal vessels resistance was significantly higher (p0.05) than after uncomplicated delivery. Recovery rates depended on the severity of hypertensive disorders. The longest increase in vascular resistance was in the ophthalmic artery and arteries of the renal parenchyma. After eclampsia PI, RI in these vessels does not reach standard values even after 6 weeks (p 0.05). **Conclusion:** The maternal hemodynamics of the puerperas whose pregnancies were complicated by PE and E is characterized by impaired contractility of the myocardium and an increased in the indices of peripheral vascular resistance. The degree of deviation in the parameters of cardiac hemodynamics and vascular resistance depended on the severity of hypertensive complications of pregnancy. Patients after PE / E are at higher risk of long-term cardiovascular disease and require cardiologic follow up and tight control of blood pressure. When planning a subsequent pregnancy, we recommend assessing cardiac function and to assure tight BP control with the help of antihypertensive therapy.

P145-1109
DIFFERENTIATED APPROACH TO THE PREVENTION OF GESTATIONAL COMPLICATIONS IN WOMEN OF DIFFERENT NATIONALITIES

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Differentiated approach to the prevention of gestational complications in women of different nationalities Prevention of obstetric and perinatal complications should begin four to six months before fertilization. Low content of vitamins B, D, iron, iodine is explained by etiological factors of obstetric and perinatal complications. More than 80% of women have a combined deficiency of vitamins, macro-, microelements. Prevention of gestational complications has an individual approach, based on clinical and laboratory data, the study of ethnic characteristics, race, lifestyle, nutrition as one of the chains of the pathogenetic range of disorders in the body of the mother and fetus. **Purpose of the study:** To increase the effectiveness of complex individualized prophylaxis of gestational complications in women with deficiency of vitamins B, D, iron, iodine through diagnostic, prophylactic, therapeutic measures. **Materials and methods of research:** 120 Slovianse, Vietnamese, Chinese, Arab nationalities were examined which during the last 5 years lived in the Odessa region of Ukraine, at the age of 20 to 30 years before and during pregnancy. The level of folic acid, cyanocobalamin, vitamin D was determined by the immunochemical method; the content of vitamins B1, B6 - liquid chromatography; serum iron - colorimetric method; iodine by a qualitative method; frequency and type of alleles of the gene C677T of the enzyme methylenetetrahydrofolate reductase - by polymerase chain reaction. Women with levels of folic acid, B1, B6, B12 below the normal values, with the polymorphic alleles of the C677T gene of the methylenetetrahydrofolate reductase enzyme, received folate (400 mg), docosahexanoic acid (200 mg) and vitamin E (12 mg) 1 time per day for 30 Days. During pregnancy, up to 12 weeks, folicas were prescribed 400 mg, from 13 weeks - folic acid and docosahexanoic acid 1 time per day for 30 days. Women with high values cyanocobalamin took folic acid, vitamin D, α-tocopherol, potassium iodide, omega-3 by 1 capsule 1 time per day before breakfast for 30 days 2-3 months before pregnancy. **Results of the research and their discussion:** Determination of the content of folic acid, vitamins B12, B1, B6, D, serum iron, iodine indicates the presence of subclinical hypovitaminosis of vitamins in 41.5% of cases, iron deficiency in 26.7%, iodine in 63.3%. Proposed individual prophylaxis of gestational complications reduced the frequency and severity of gestational pyelonephritis by 2.2 times, preeclampsia by 2.7 times, the threat of termination of pregnancy by 8.1 times, the threat of premature birth by 3.8 times, placental dysfunction in 3.7 times, fetal growth retardation syndrome - 3.7 times, fetal antenatal stress - 5.7 times (p <0.001) compared with the average statistical data of the region. **Conclusion:** Low content of vitamins of group B, D, serum iron, iodine and high levels of B12 leads to obstetric and perinatal complications, which explains the expediency of timely correction of these conditions. Prevention of complications of gestation is recommended to begin 4-6 months before fertilization. The drugs of choice for correcting the content of vitamins, trace elements are folates (400 mg), docosahexanoic acid (200 mg) and vitamin E (12 mg). During pregnancy, up to 12 weeks, folate should be prescribed at 400 mg, from 13 weeks - folate and docosahexanoic acid. Women with high levels of cyanocobalamin should be prescribed folic acid, vitamin D, α-tocopherol, potassium iodide, omega-3 for 2-3 months before pregnancy.

P146-1388
ROLE OF HYSTEROSCOPY IN EVALUATION OF INTRAUTERINE PATHOLOGY

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Problem statement: Hysteroscopy is the gold standard for evaluation of uterine cavity. It can be performed either as office setting or as day care procedure under general anaesthesia. The aim of this study was to evaluate the role of hysteroscopy in diagnosis intrauterine causes (adhesions, polyps, endometritis, congenital uterine anomalies, fibroids etc.) of female infertility. **Methods:** The study was conducted on 134 infertility patients from January 2016 to January 2017. Preoperative diagnosis of intrauterine pathology was established by ultrasonography, hysterosalpingography, magnetic resonance imaging. In all cases, we performed hysteroscopy in the follicular phase of the menstrual cycle then we analyzed the results of evaluation. **Results:** We investigated patients between 22 and 44 years old. The mean age of women was 31.6 ± 6.1 years. 46 (34.3%) women consulted for primary infertility and 88 (65.7%) had secondary infertility. The mean duration of infertility was 5.2 ± 3.6 years. There was no intraoperative or postoperative complication. In 32 (23.9%) cases the hysteroscopic view and anatomopathological examination was normal. In other 102 (76.1%) cases by hysteroscopy was diagnosed different intrauterine pathology as follow: polyps – 56 (41.8%) cases, congenital uterine anomalies – 19 (14.2%) cases, fibroids – 14 (10.5%), adhesions – 8 (6.0%). In 7 (5.2%) women were diagnosed endometritis certified by anatomopathological examination and in 7 (5.2%) patients were discrepancy with menstrual cycle phase. In 23 (17.2%) cases more than one find in the same patient was diagnosed. **Conclusion:** Hysteroscopy is a safe and an effective method in diagnostic and treatment of intrauterine pathology in infertility women. That hysteroscopy can identify diseases that aren't diagnosed by ultrasound and hysterosalpingography.

P147-1533
UNEXPECTED FINDING DURING BREAST CANCER STAGING

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Breast cancer is the most frequent malignancy diagnosed in females. After diagnosis, staging is essential to determine the extent of the disease and adjust the therapeutic approach. We present a case of hematologic cancer, diagnosed incidentally during the staging of breast carcinoma. A 64-year-old multiparous female presented with

an abnormal finding on a routine mammogram - a supra areolar nodule in the right breast, heterogeneous and poorly defined, with approximately 20 mm (BIRADS 4/5). A guided ultrasound biopsy was performed, which revealed the presence of invasive ductal breast carcinoma, highly differentiated, with positive estrogen, progesterone and HER2 receptors, with ki67 of 30%. No suspicious axillary nodes were present. In order to complete the staging, the patient performed a breast MRI and thoracoabdominal (TA) CT, which revealed an abdominal cystic 50 mm mass, with thin walls, contiguous to the anterior portion of the aortic bifurcation. Bone scintigraphy showed minimal abnormal uptake in the right radius and right femur and extensive diaphyseal uptake in the left tibia. It was decided to perform pelvic MRI and PET-CT with FDG-F18. The former confirmed the presence of a suspicious lombo aortic mass, and the latter revealed a metabolically active abdominal lesion and medullary infiltration of the left tibia, both imposing pathologic examination. Due to the close anatomic relation to vascular structures, Angio-CT of the aorta was performed, showing a nodular retroperitoneal formation with mild peripheral enhancement, anterior and inferior to the aortic bifurcation, with no signs of connection to the vascular lumen. The case was discussed within a multidisciplinary team and it was decided to perform diagnostic laparotomy, with biopsy of the abdominal mass and, at the same time, biopsy of the tibia. Histopathologic examination revealed that both lesions corresponded to diffuse follicular Non-Hodgkin B cell lymphoma, grade 3A. After restaging the breast cancer, lumpectomy with sentinel lymph node biopsy was performed (pT2 pN1 (1/4) M0 ER 40% PR 5-10% HER2+ Ki67 30%). After surgery, the patient started chemotherapy with R-CHOP for both the lymphoma and adjuvant for breast cancer. Biological therapy, radiotherapy and hormonotherapy will follow. In rare occasions, new and unexpected findings may appear when staging a malignancy. Besides metastases, we must remember and consider less frequent breast cancers and also the rare possibility of two coexistent yet different malignancies. Careful investigation and a multidisciplinary approach of the patient is mandatory.

P148-1544
IS ARTIFICIAL OOCYTE ACTIVATION WITH CALCIUM IONOPHORE EFFECTIVE FOLLOWING PREVIOUS ICSI FERTILISATION/CLEAVE FAILURE?

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Introduction: The ICSI (Intracytoplasmic Sperm Injection) procedure improves fertilization rates in cases of male factor infertility; however, fertilization failure still occurs in 2% to 3% of ICSI cycles. Artificial Oocyte Activation(AOA) performed can induce calcium oscillation in oocytes and initiate the fertilization process. We evaluated the usefulness of AOA in cases of total fertilization failure and failure to cleave in previous cycles. **Methods:** A retrospective audit was performed between 2014 to August 2017 which identified nine ICSI-AOA cycles performed for male cause of infertility. In eight cases AOA was performed on patients who had previous failure to fertilise with ICSI procedure and in one case AOA was performed on a patient who had failure to cleave with ICSI in previous treatment. **Results:** Fertilisation was achieved in all the nine cases and all the nine patients had embryo transfers. The clinical pregnancy rate was 55.5% (6 out of 9 embryo transfers- 4 of whom had live births and one is currently ongoing pregnancy). **Conclusion:** Our findings are encouraging and shows that AOA may be useful in selected patients who have a low fertilization rate (30%) or total fertilization failure following ICSI procedure. Our audit findings may be used to counsel patients whose previous treatment fit the above criteria. In theory, egg activation using calcium ionophores could cause embryos to have abnormal numbers of chromosomes, which could cause the pregnancy to miscarry. Currently there is limited evidence available from randomised controlled study available to prove efficacy or safety of AOA. HEFA (Human Fertilisation and Embryology Authority UK) have advised clinics in the UK that this treatment can be used so only in selected patients who have had failed fertilisation and to justify their reasons for doing so.

P149-1166
CORRELATION BETWEEN ENDOMETRIAL THICKENING AND HISTOPATHOLOGY FINDINGS IN POSTMENOPAUSAL WOMEN

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Problem Statement: Endometrial cancer is the most common gynaecologic malignancy in developed countries. Per data from the national oncologic registry, at Portugal in 2010 the incidence of endometrial cancer was 17,8 new cases per 100.000 women, with a mortality of 1,9/100.000. Ultrasound measurement of endometrial thickness is a non-invasive diagnostic toll for assessment of endometrial pathology in postmenopausal women. Thickened endometrium is an indication for invasive evaluation as endometrial sampling or hysteroscopy. The cut-off value of endometrial thickness that should warrant an endometrial study is not consensual between different guidelines, varying from 3 to 5 mm. Most studies suggest that transvaginal ultrasound is an effective first line exam for endometrium evaluation in postmenopausal women, however it cannot substitute endometrial sampling. Our aim is to correlate endometrial thickening with histopathology findings and understand the diagnostic value of ultrasound measurement in predicting endometrial pathology in postmenopausal women in our hospital. **Methods:** This retrospective study analysed one hundred postmenopausal women from gynaecology appointment in Faro's Hospital in Algarve, Portugal. All patients underwent transvaginal ultrasound and endometrial sampling. There was recorded a complete gynaecological and obstetric history as well as body mass index and smoking habits. This data was analysed in SPSS vs 10. **Results:** We studied one hundred postmenopausal women with vaginal bleeding or asymptomatic endometrial thickening. The mean age was 66,7 years and median menopause age was 50,2 years. About 16% of the women studied have smoking habits and more than half had hypertension. The average body mass index was 31 and 29% of the women were obese. Sixty-tree women performed hysteroscopy were the main finding was polyps. We found that 79% of the women had endometrial thickening superior to 5mm. Seventy-two presented vaginal bleeding. Furthermore, almost 91% of women with endometrial pathology had vaginal bleeding and all women with endometrial carcinoma had symptoms. Endometrial thickening was found at 96% of the women with endometrial hyperplasia and carcinoma. Moreover, average endometrial thickening was superior (16,7 vs 14,25 mm) in woman with malignant and premalignant lesions, however this difference is not statistical significant. A great percentage of women with benign lesions, like polyps, also had endometrial thickening, which reduces the specificity of the ultrasound endometrial thickening measurement. There were drawn ROC curves to understand the specificity and sensibility of ultrasound measurement to detect malignant or premalignant endometrial lesions, but the number of patients was small and the evidence was inconclusive. **Conclusion:** Our study found that endometrial thickening tends to correlate with endometrial pathology, however ultrasound measurement alone is not a good predictor of malignant and premalignant lesions, so it is required further invasive diagnostic testing. Future perspectives of our work are to expand this sample and draw ROC curves to determine the cut-off value of endometrial thickening at our population and adjust our clinical practice.

P150-1091
FOLLICULAR FLUID SOLUBLE RECEPTOR FOR ADVANCED GLYCATION END PRODUCTS (sRAGE): A POTENTIAL PROTECTIVE ROLE IN POLYCYSTIC OVARY SYNDROME

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Problem statement: The involvement of AGE-RAGE in the inflammatory response results in perturbations of the ovarian microenvironment and PCOS has reached a consensus. But, the relationship of sRAGE and inflammatory factors is controversial. Our gruop want to explore the relationships between the soluble receptor for advanced glycation endproducts (sRAGE) and the outcome parameters following in vitro fertilization-embryo transfer (IVF-ET) in patients with polycystic ovary syndrome (PCOS) and investigate the protective effect of sRAGE in PCOS development regarding inflammation. **Methods:** We conducted a prospective analysis of a subsample of 74 participants from the Reproductive Medical Center of the First Affiliated Hospital of Zhengzhou University. We quantified sRAGE, vascular endothelial growth factor (VEGF), tumor necrosis factor (TNF-α), interleukelin-6 (IL-6), and C-reactive protein (CPR) protein levels in the follicular fluid from 39 PCOS and 35 non-PCOS reproductive-age women. sRAGE and VEGF, TNF-α, IL-6, and CRP in follicular fluid aspirated without blood were measured by ELISA. **Results:** sRAGE concentrations in the follicular fluid were significantly lower in the PCOS group compared to those in the control group, while VEGF, TNF-α, IL-6, and CRP concentrations were significantly higher in the PCOS group than in the control group (P 0.05). sRAGE was significantly, inversely correlated with the total dose of gonadotropin (Gn) in the PCOS group undergoing IVF

treatment (r = −0.451, P = 0.004). After adjusting for age and Gn dose (in international units used per cycle), sRAGE protein levels in the follicular fluid were significantly, inversely related to VEGF (r =−0.378, P = 0.018), TNF-α (r =−0.450, P = 0.004), IL-6 (r =−0.455, P = 0.004), and CRP (r = −0.375, P = 0.019). Conclusion sRAGE in the follicular fluid might exert a protective effect against the inflammatory action of PCOS development. **Conclusion:** Next, we will investigate the effects of sRAGE during direct interventions affecting inflammatory factors in granulosa cells, tissues, and whole animals. We will also verify whether sRAGE is protective against the occurrence and development of PCOS. From the new perspective of sRAGE, we want to reveal the mechanism of the occurrence and development of PCOS and provide further new ideas for the prevention and treatment of this syndrome.

P151-1154
THE EFFICACY AND SAFETY OF ACUPUNCTURE IN WOMEN WITH PRIMARY DYSMENORRHEA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: Primary dysmenorrhea is defined as cramping pain during menstruation without any pelvic pathology, causing the restriction of daily activities. Nonsteroidal anti-inflammatory drugs (NSAIDs) and oral contraceptives is recommended as conventional treatments. However, with these medications, some patients could not get pain reduction and others experience side effects such as nausea, dyspepsia, or vaginal bleeding. Acupuncture has been widely used to alleviate diverse pains. Many clinical studies were conducted to show its efficacy on menstrual pain, but previous reported systematic reviews (SRs) concluded the conflicting results of the efficacy. Therefore, we aimed to evaluate the current evidence regarding the efficacy and safety of acupuncture on primary dysmenorrhea. **Methods:** We searched the following 10 databases for relevant articles published before November 2016: MEDLINE, EMBASE, CENTRAL, Allied and Complementary Medicine Database (AMED), three Chinese databases, two Korean databases, and one Japanese database. Our study included randomized controlled trials (RCTs) that measured menstrual pain intensity and its associated symptoms. The intervention groups were received all types of acupuncture that penetrate skins using needle insertion, and the control groups were no treatment, usual care, placebo acupuncture, and oral medications. Risk of bias in each article was assessed per Cochrane risk of bias tool for RCTs. For the statistical pooling, the risk ratio (RR), mean differences (MD) or standardized mean differences (SMD) was calculated with 95% confidence intervals (CIs) using the Review Manager software (RevMan v5.3). **Results:** This review included 35 RCTs; the meta-analysis included 24 RCTs. Most studies showed low or unclear risk of biases. After pooling, manual acupuncture (MA) was more effective at reducing menstrual pain, compared to the control groups receiving no treatment (SMD = -10.90, 95% CI [-15.88, -5.93], Fig. 1(A)), or NSAIDs (SMD = -0.47, 95% CI [-0.73, -0.22]). Electro-acupuncture was more effective at reducing pain, compared to no treatment and placebo acupuncture (MD = -3.97, 95% CI [-7.84, -0.11], Fig. 1(B)). Some studies showed that the efficacy of acupuncture was maintained after a short-term follow-up. However, there was no significant difference between MA and placebo acupuncture (SMD = -0.36, 95% CI [-0.74, 0.01], P = 0.06).

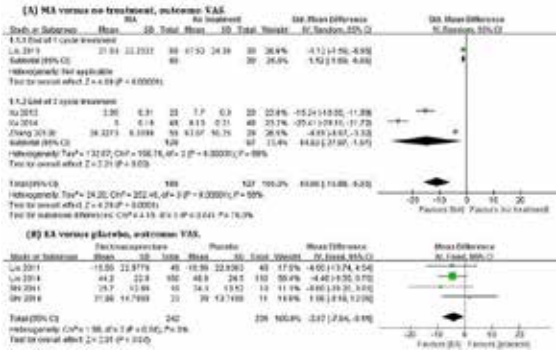

Fig. 1. Meta-analysis of the studies evaluating the effects of acupuncture on primary dysmenorrhea. **Conclusion:** The results of this study suggest that acupuncture might reduce menstrual pain and associated symptoms more effectively compared to no treatment or NSAIDs, and the efficacy could be maintained during a short-term follow-up period. However, the efficacy of MA compared to a placebo was not convincing. Despite limitations due to the moderate quality and methodological restrictions of the included studies, acupuncture might be used as an effective and safe treatment for females with primary dysmenorrhea.

P152-1185
THE EFFECT OF TRANSPLANTATION ROUTES ON THE EFFICIENCY OF HUMAN UMBILICAL CORD MESENCHYMAL STEM CELLS IN THE TREATMENT OF STREPTOZOTOCIN-INDUCED GESTATIONAL DIABETES MELLITUS IN RATS

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Gestational diabetes mellitus (GDM) causes harm to both the mother and fetus.Although transplantation of human umbilical cord mesenchymal stem cells(HUMSCs) is an ideal therapy for GDM,there is no confirmation on the ideal transplant routes.Here,streptozotocin(STZ)-induced GDM rats were transplanted with HUMSCs by different routes:single or multiple tail vein injection,liver parenchyma and renal capsule transplants.These were compared to positive controls (STZ-induced,untreated) and negative controls(non-induced,untreated) to determine the effect of the transplant on the control of GDM.We isolated and cultured the HUMSCs for transplantation.Biological activity of HUMSCs was demonstrated by immunophenotypic characterization,the potency of differentiation and flow.The blood glucose level and body weight of rats in each group were determined and the number,weight,and blood glucose of offspring of different groups were evaluated.Based on results,we concluded that transplanting HUMSCs could effectively relieve the symptoms of elevated blood glucose and weight loss and improve the body weight and survival rate of offspring.Continuous injections of HUMSCs were required to persistently decrease the blood glucose of diabetes mellitus(DM) and GDM rats.Transplanting HUMSCs into the liver or renal capsule of GDM rats gave a similar effect on controlling blood glucose and compensating body weight.HUMSCs therapy increased the number and bodyweight of offspring and improved their activity.In summary,this study has enabled progress toward determining the optimal route for GDM therapy.

P153-1452
TURKISH WOMEN'S EXPERIENCES AND EXPECTATIONS OF VAGINAL EXAMINATIONS IN LABOUR: A QUALITATIVE STUDY

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Problem statement: Vaginal examination plays an important role during labour. Vaginal examination is a necessary procedure to determine the progress in labour. But it`s an uncomfortable experience and during labour, women may report feelings of fear, shame, pain and loneliness. **Objective:** The aim of the study was to explore women's experiences and expectations during vaginal examinations in labour. **Methods:** This qualitative research design based upon qualitative with phenomenological approach. A purposive sample of 13 women post-delivery who had given birth vaginally and were able to speak and read Turkish. Data were collected by tape-recorded open-ended interviews during the early postnatal period in a maternity clinic of a state hospital in Antalya, Turkey. The interviews were started by asking "Please tell me your experience during vaginal examination". Probing questions were also used such as "Can you tell me what you thought about vajinal examination?", "Can you explain expectation from health professionals during vaginal examination". Data analysis were phenomenological hermeneutic analysis based upon Riceour's interpretation theory. Ethical approval was obtained from Ethical Committee of Antalya Training and Research Hospital. Also, permission was obtained for the voice recordings of the interviews from women at the beginning of the interviews. The names of the participants were kept confidential. **Results:** Data were classified into four themes that "emotional", "thoughts", "experiences" and "expectations from health professionals and others". Experiences divided into two sub-themes as experiences that complicing and facilitating the vaginal examination. The women accepted necessity the vaginal examinations for their own and their baby's health during labour. But some women stated that vaginal examination was unnecessary during pregnancy. Pain, embarrassment, fear and

excitement were frequently experienced during vaginal examination. Some women felt embarrassed when examined by a male doctor, but the attitude, approach and skill of the examiner was generally found to be more important than gender. The women were wanted a doctor who is an expert or experienced, kind, clean, friendly, informative, relaxing. The women wanted to be supported during the examination by nurses and midwifery. Almost all women were expected a nurse or midwifery who has a humanistic perspective such as smilingly, warm, gentle, empathic, non-judgmental, motivator. **Conclusions:** Vaginal examination should be discussed with women. The health professionals should be sensitive towards the needs of women in labour, including the provision of explanations and information regarding vaginal examinations.

P154-1235
LONG-TERM COSMETIC OUTCOMES OF THE POSTOPERATIVE WOUND AFTER LAPAROSCOPY FOR ADNEXAL SURGERY: OVER TWO-PORT LAPAROSCOPY INCLUDING CONVENTIONAL LAPAROSCOPY VS. SINGLE-PORT LAPAROSCOPY

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Problem statement: Recently, transumbilical, single-incision laparoscopy (known as single-port laparoscopy) has been used in many types of operations. Although cosmetic superiority is widely stated as an advantage of single-port laparoscopy, few studies have examined its cosmetic outcomes, especially regarding long-term outcomes and patient satisfaction. We sought to compare patients' cosmetic satisfaction more than 6 months after over two-port laparoscopy, including conventional laparoscopy, vs. single-port laparoscopy. **Methods:** One hundred ten patients who underwent adnexal surgery performed by a single surgeon at a single institution between March 2005 and February 2017 were enrolled. After 6 months, post-laparoscopy, the patients were asked to complete the Patient Scar Assessment Scale (PSAS), a validated tool for evaluating linear scars, and the Ultimate Question (UQ), which correlates with the patient's overall satisfaction. We evaluated the surgical scar using the Observer Scar Assessment Scale, which includes the Umbilical Scar Overall Shape Assessment Scale (USOSAS) and the Vancouver Scar Scale (VSS). A two-tailed Student's *t*-test was used to analyze the differences between the study groups. P values 0.05 were considered significant. **Results:** The mean age and parity of the over two-port laparoscopy group vs. the single-port laparoscopy group were 37.2±9.3 years vs. 35.0±12.2 years and 1.1±1.0 vs. 1.0±1.1, respectively. Significantly more histories of preoperative laparotomy and postoperative hemoglobin changes were observed in the over two-port laparoscopy group than in the single-port laparoscopy group. There were no significant differences in the PSAS and UQ among the enrolled patients. The USOSAS and VSS showed no significant differences between the over two-port laparoscopy group and the single-port laparoscopy group. **Conclusion:** The over two-port laparoscopy group had significantly more previous laparotomies and postoperative hemoglobin changes than the single-port laparoscopy group. However, there was no significant difference in patient cosmetic satisfaction between the over two-port laparoscopy including conventional laparoscopy group and the single-port laparoscopy group.

P155-1563
THE IMPORTANCE OF MOTHER-INFANT ATTACHMENT

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Attachment is an emotional connection against another private person to an individual. Attachment theory explains the cognitive, emotional and behavioral relationship that develops trust between the primary caregiver and the child. The emotional connection of the mother with the baby is an effective and unique relationship that starts with pregnancy, increases with fetal movements, rises at birth, and occurs in the first year of postpartum life. The main point in mother-infant attachment is that the baby's is based on experiencing persistent relationship in a comfortable, warm, friendly and safe environment and eliminating of their physical and mental needs. Bowlby`s attachment theory posits focuses on in the early period maternal attachment to the baby due to the need for biological trust, whether the mother is available if the baby needs it, the baby`s reaction and how their behavior is interpreted by the baby. This theory suggests that attachment behavior during infancy is an important function in shaping and sustaining the future life of the individual and argues that close relationships with the other people are effective in the development of trust. These feelings of attachment help the mother to show love and compassion to her baby, to protect and nurture her, to show her interest, to interact and to be sensitive to the needs of the baby. In other words, it is an important component in terms of positive adaptation and motherhood. While attachment to the needs of the baby is met, the person looking at the baby does not only perceive these requirements as a duty, she/he also provide happiness and satisfaction from these actions, this is a bilateral relationship with this aspect. Considering the studies that examine the factors affecting the mother-infant attachment, the level of income, social support, co-morbidity, psychiatric disorders, planning of pregnancy, readiness to get pregnant, counting after the movements, ultrasonography and baby screening, healthy pregnancy progress, the need for maternal age, parity, mother`s talking with the baby, touching her, the weight of the new nature, need for newborn intensive care, preparedness after birth and birth, uneventful delivery, has been reported to be effective on. It has been reported that inadequate attachment and negative maternal behaviors are associated with postpartum anxiety and depression, adversely affecting the baby`s advanced life, and increased risk of physical and mental illness. Because mother-infant interaction affects the child`s development and whole life, important responsibilities for midwife / nurses fall prenatal, parturient and postnatal. Midwives / nurses should assist in initiating and maintaining the mother-infant attachment process with a professional approach. It is important to identify appropriate mothers who are at risk of undernutrition during pregnancy and to have appropriate midwifery / nursing interventions to prepare the woman for the mother. Post-natal maternal and neonatal attachment indications should be assessed. To be able to establish the attachment, the health personnel should help their mother`s concerns after the birth and help her perceive the baby by promoting maternal behavior. In this period, the mother should be absolutely supported, it is important to make good observation and evaluation and to add the mother to the care of the baby. **Keywords:** Attachment, mother-infant attachment, maternal attachment

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P156-1346
NEUROHUMORAL FACTORS IN PREDICTING THE OUTCOMES OF LATE PRETERM BIRTHS

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Volgograd State Medical University, Russia
N. Zharkin
Obstetrics and Gynecology, Prof., Volgograd, Russia

Problem statement: Preterm birth rates have been reported to range from 5 to 9% in some developed countries. A recent rise in preterm birth rates has been largely attributed to the increasing late preterm birth rate, defined as a preterm birth between 34 to 36 weeks 6 days' gestation and accounting for 50% of all preterm births. Premature rupture of the membranes (referred to as PROM) is the leading cause of the onset of early labour in preterm birth. Finding factors that could accurately predict PROM presents a major challenge. **Objective:** To assess the reaction of the autonomic nervous system as the cause of late preterm birth and PROM. **Methods:** In a prospective study, we examined 98 pregnant women of child-bearing age with late preterm birth and PROM (study group). The study group was subdivided into two subgroups – one which included patients with "mature" cervix (n=52) and the other included patients with "immature" cervix (n=46). The comparison group included 68 late preterm delivery cases with term PROM. The control group was made up of 30 patients with term PROM who delivered at term. We examined the birth canals of the study participants to evaluate the autonomic nervous system activity. We evaluated labour and delivery outcome measures and the condition of the newborns after birth. We used parametric and non-parametric statistical methods to compute the p value. The critical value for hypothesis testing was p 0.05. **Results:** No complications have been reported to occur in patients who had premature rupture of the membranes and delivered vaginally. This has been accounted for by the adaptation of the autonomic nervous system to pregnancy and with "mature" cervix. The latent period, time between membrane rupture and the onset of labour was 7.8±0.3 hours in primigravida and 6.6±0.5 hours in multigravida (p0.05). The average duration of labour was 9.2±0.63 hours in primigravida and 8.1±0.69 hours in multigravida (p0.05). The newborn infants showed no signs of asphyxia. Segmental vascular responses in patients with "immature" cervix and PROM demonstrated maladaptation of the autonomic nervous system to pregnancy. The latent period in these patients was 14.2±1.42 hours in primigravida and 11.5±1.1 hours in

multigravida (p0.05). This subgroup exhibited abnormal uterine contraction patterns, with the contractions being significantly higher than in the comparison group (p0.01). The average duration of labour was 11.2±0.92 hours in primigravida and 9.95±0.54 hours in multigravida. We performed C-section in 17 (37%) patients with "immature" cervix due to a lack of effect from uterine contraction abnormality treatment (RR=2.0; CI:1.10-3.96). 8 (17.4%) infants were born with asphyxia (Apgar score 4.6±0.84) and required neonatal resuscitation (p0.01). **Conclusion:** We conclude that PROM does not affect the labour process and pregnancy outcomes in patients with well-adapted autonomic nervous system. Pregnancy outcomes in such patients are usually favorable. Dysfunction of the autonomic nervous system contributes and PROM causes the risk of contraction abnormalities, intrauterine infection and suffering of the fetus.

P157-1301
SATISFACTION RATE OF NORMAL VAGINAL DELIVERY AND ITS RELATIVE FACTORS AMONG CHILDBEARING WOMEN IN IRAN HOSPITALS, 2015-2017

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Background: Patient`s satisfaction is one of the most important health indicators in health care systems which is used for care qualification and providing health services. Hence, a descriptive study is carried out to determine the satisfaction degree of normal delivery and its relative factors in childbearing women at "Motahari, Jahrom" Hospitals during 2015-2017. **Materials and Methods:** In this study, 690 literate Iranian childbearing mothers were chosen via a non-probable sampling. Data gathered by a questionnaire consisting of 4 parts (pain severity, personal control, environmental satisfaction, childbirth satisfaction) and two checklists of demographic features and past obstetrics records. Respectively, the pain ruler was used to estimate the pain severity, the questionnaire of labors Agentry Scale to personal control, 17-question Likert scale to environmental contentment and 18 questions derived from 34-item questionnaire of Mackey Childbirth satisfaction to childbirth content. Using SPSS 16, Mann-Whitney and Cruskal- Wallis non-parametric tests, Spearman's Correlation, variance Analysis and regression test were applied to analyze the information. **Results:** Among the studied women, 68/9% were contented with their childbirth, whereas 9.1% of them were unsatisfied with their childbirth. There was a meaning full relationship among pain severity, environmental satisfaction, personal control, childbirth factor, reserved length of the first phase of labor, pregnancy age, the conformity of newborn's gender with father's and with mother's will (P0/001), lack of problem in their second and third delivery (P=0/01), mother's degree of education (P=0/009), economical situation (P=0/02), and spouse's occupation (P=0/03) with childbirth gratification in hospital. there was a significant relationship between pain severity, personal control, the reserved length of the first and second phase (P0/001) in hospital. Based on regression test, the personal control variables (P0/001) and environmental content were achieved to be the predictors of childbirth gratification. **Conclusion:** It is outstanding that the contentment with childbirth is a multi-factor issue and to increase the mothers' positive experiences and prevent them from side-effects of their negative experiences, all the aspects must be comprehensively, simultaneously, considered.

Notes

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VAGINAL ERBIUM LASER FOR WOMEN HEALTH

15.00 –18.00	*Thursday, November 30, 2017*	Hall C
15:00 - 15:05	Introduction by program coordinator **Santiago Palacios,** Spain	
15:05 - 15:45	Physical concepts of the application of lasers in Gynecology andthe treatment of Vaginal Relaxation Syndrome **Zdenko Vizintin,** Slovenia	
15:45 - 16:25	Laser use in Genitourinary Syndrome of Menopause **Marco Gambacciani,** Italy	
16:25 - 17:05	Laser use in Stress Urinary Incontinence and Pelvic Organ Prolapses **Aleksandra Novakov-Mikic,** Serbia	
17:05 - 17:45	Future indications of laser treatment in Gynecology **Santiago Palacios,** Spain	
17:45 - 18:00	End-of-Course Test	

Industry Symposium

COMING TO GRIPS WITH MODERN-DAY ART

Hall A

10:20 – 11:50	*Friday, December 1, 2017* *Supported by IBSA*
Chairpersons	**Bart Fauser,** *The Netherlands* **Wilfried Feichtinger,** Austria
10:20 – 10:25	Welcome and introduction
10:25 – 10:50	Ovarian stimulation for IVF: Thirty years of learning **Basil C. Tarlatzis,** Greece
10:50 – 11:15	Beyond classical COS: Coming out of the box **Dominique de Ziegler,** France
11:15 – 11:40	Novel concepts in the classification and treatment of male infertil **Csilla Krausz,** Italy
11:40 – 11:50	Q&A

Industry Symposium

FERRING PHARMACEUTICALS

INDUCTION OF LABOUR: IS TOMORROW, THE SAME AS TODAY?

10:20 – 11:50	*Friday, December 1, 2017* *Supported by Ferring*	Hall D
Chairpersons	**Hanns Helmer,** Austria **Asma Khalil,** UK	
10:20 – 10:25	Welcome and introduction **Hanns Helmer,** Austria **Asma Khalil,** UK	
10:25 – 10:50	Current landscapes and future directions in IoL **Hugh Miller,** USA	
10:50 – 11:30	Induction of labour methods: Room for debate? • Pharmacological methods • Mechanical methods **Thierry Harvey,** France **Jacob Bar,** Israel	
11:30 – 11:40	Future considerations **Hanns Helmer,** Austria **Asma Khalil,** UK	
11:40 – 11:50	Q&A	

FERRING PHARMACEUTICALS

UNDERSTANDING INDIVIDUALIZED TREATMENTS

12:10 – 13:40

Friday, December 1, 2017
Supported by Ferring

Hall A

Capsule

EBM provided a big leap forward in the understanding and treatment of disease. Is something missing in the translation of the data for individuals?

Chairpersons

Basil Tarlatzis, Greece
Georg Griesinger, Germany

12:10 – 12:55

Is EBM equipped to meet the challenges for developing personalized medicine?
What hampers individualized approaches in IVF?
Georg Griesinger, Germany
Personalized medicine is the way to the future
Bart Fauser, The Netherlands
Discussion

12:55 – 13:40

AMH is highly valuable for ovarian stimulation
Con: **Claus Yding Andersen,** Denmark
Pro: **Dominique de Ziegler,** France
Discussion

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www.babyou.org

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- BABYOU connects women for empowerment and exchange
- BABYOU provides information about different related topics from a scientific, medical and evidencebased complementary medicine perspective
- BABYOU supports via online video courses the pregnant women with different needs and prepares them for the birth and the initial time after emotionally, physically and psychologically

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www.barcelonaivf.com/en

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www.medical.escoglobal.com

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Most of our products are designed in Denmark and manufactured in the EU. The primary focus of this division is to increase pregnancy success rates and patient satisfaction.

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www.fotona.com

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www.richter.hu

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www.fertilovit.com/en-US/index.html

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www.ibsa-international.com

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The company's other franchises include osteoarthritis, pain-management, dermatology and thyroid diseases."

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www.arcana-mylan.at
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www.pantarheioncology.nl

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Related Events

COGI

Induction of Labour:

IS TOMORROW, THE SAME AS TODAY?

Understanding Individualized Treatments

FRIDAY 1 DECEMBER 2017; VIENNA, AUSTRIA

10:20–11:50

Co-chairpersons:
Asma Khalil (UK) and Hanns Helmer (Austria)

AGENDA

10:20–10:25
Welcome and introduction
Asma Khalil (UK) and Hanns Helmer (Austria)

10:25–10:50
Current landscapes and future directions in IoL
Hugh Miller (USA)

10:50–11:30
Induction of labour methods: Room for debate?
- Pharmacological methods – Thierry Harvey (France)
- Mechanical methods – Jacob Bar (Israel)

11:30–11:40
Future considerations
Asma Khalil (UK) and Hanns Helmer (Austria)

11:40–11:50
Q&A
All

12:30–13:40

Co-chairpersons:
Basil Tarlatzis (Greece) and Georg Griesinger (Germany)

AGENDA

12:10–12:55
Is EBM equipped to meet the challenges for developing personalized medicine?
- What hampers individualized approaches in IVF? – Georg Griesinger (Germany)
- Personalized medicine is the way to the future – Bart Fauser (The Netherlands)
- Discussion

12:55–13:40
AMH is highly valuable for ovarian stimulation
Con: Claus Yding Andersen (Denmark)
Pro: Dominique de Ziegler (France)
- Discussion

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