

FCS21.2 LIFESTYLE AND OUTCOMES OF ASSISTED REPRODUCTIVE TECHNIQUES: A NARRATIVE REVIEW

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Objectives: This review study aimed to identify an ideal lifestyle in assisted reproductive treatment cycle through review of relevant literature to infertile people's lifestyle and its relationship with ART results.

Method: In this study, researchers conducted their computer search in public databases Google Scholar general search engine, and then more specific: Science Direct, ProQuest, SID, Magiran, Irandoc, Pubmed, Scopus, cochrane library, and Psych info; Cumulative Index to Nursing and Allied Health Literature (CINAHL), using Medical Subject Headings (MeSH) from 2004 to 2013. Firstly, a list of 150 papers generated from the initial search. 111 papers were included. Finally, quality assessment of full text studies was performed by two independent reviewers. Researchers reviewed summary of all articles sought, ultimately used data from 62 full articles to compile this review paper.

Results: Review of literature led to arrangement of nine categories, including: The relationship of ART outcomes with physical health; The relationship between ART results and weight control and diet; The relationship of ART outcomes with exercise and physical activity; The relationship of ART results with psychological health; The relationship of ART outcomes with avoiding medication, drugs and alcohol; The relationship of ART outcomes with disease prevention; The relationship of ART outcomes with environmental health; The relationship of ART outcomes with spiritual health; and The relationship of ART outcomes with social health.

Conclusions: The following was obtained from review of studies: since lifestyle is among important, changeable, and influential factors in fertility, success of these methods can be greatly helped through assessment of lifestyle patterns of infertile couples, and design and implementation of healthy lifestyle counseling programs, before and during implementing assisted fertility techniques.

FCS21.3 CUMULUS CELL ROLE ON MOUSE GERMINAL VESICLE OOCYTE MATURATION, FERTILIZATION, AND SUBSEQUENT EMBRYO DEVELOPMENT TO BLASTOCYST STAGE *IN VITRO*

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Objectives: The purpose of this study is to investigate the effect of cumulus cells on maturation, fertilization and subsequent development of mouse germinal vesicle oocytes.

Method: A total of 470 G.V. oocytes were used in this project. Collected oocytes were divided into two groups; GV oocytes without cumulus cells and GV oocytes with cumulus cells. The oocytes in both groups were cultured in TCM-199 medium supplemented with 10% fetal bovine serum in a humidified atmosphere of 5% CO₂ in air at 37°C. To do in vitro fertilization, matured oocytes from each group were placed in T6 medium and capacitated spermatozoa were added. Then the fertilized oocytes were cultured to obtain blastocyst 120 h. after fertilization. Data was analyzed by chi-square test and differences in the values were considerable significant when $p < 0.05$.

Results: Maturation, fertilization, cleavage and blastocyst rates in denuded oocytes were: 76.32%, 57.49%, 51.15% and 19.14% respectively. In the cumulus-oocyte complex rates were: 89.41%, 80.76%, 75.58%

and 45.62% respectively; all in the cumulus-oocyte complex were significantly higher than those of denuded oocytes ($p < 0.05$).

Conclusions: The present study indicates that cumulus cells have important role during maturation, fertilization and subsequent embryo development to the blastocyst stage.

FCS21.4 CAN SEMI-QUANTITATIVE PREGNANCY TESTS ASSIST WOMEN UNDERGOING IVF TO MONITOR HCG LEVELS OUTSIDE OF A CLINIC SETTING?

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Objectives: Semi-quantitative pregnancy tests (SQPT), that provide assessments of urinary hCG levels in bracketed ranges, have proven useful in assessing ongoing pregnancy following medical abortion. We postulated that the test may also be a useful tool in assisted fertility treatment, improving quality of care for women desiring to become pregnant. To that end, we conducted two pilot studies to examine the feasibility and acceptability of performing repeat SQPTs at home to monitor hCG levels following in vitro fertilization (IVF).

Method: One hundred and one women presenting for IVF treatment (50 at Hung Vuong Hospital in Ho Chi Minh City, Vietnam, and 51 at Stanford University Medical Center in Palo Alto, California) participated in these pilot studies. Women were asked to perform the SQPT at home up to 5 times in the U.S. and up to 6 times in Vietnam in the weeks following embryo transfer and to attend clinical visits, which included serum hCG testing.

Results: There was high concordance between the urine SQPT results and the serum hCG results. Almost all SQPTs (99.1%, $n=106/107$) showing steady or increase in hCG had a corresponding serum result, and 87.8% ($n=43/49$) of SQPTs showing negative or decrease in hCG had a corresponding serum result. Three-fourths of all women (73.3%) reported being satisfied or very satisfied with using the SQPTs at-home. Almost all (96.5%) said that the SQPT was easy or very easy to use.

Conclusions: Given its accuracy in assessing hCG trends compared to serum hCG and its high acceptability among participants, the SQPT could be added to standard IVF care as an at-home supplement to current serum testing protocols, or, eventually, to replace them. A home test to identify early pregnancy and its progress might improve the quality of care for infertility clients.

FCS21.5 COMPARISON OF ASSISTED REPRODUCTIVE TECHNOLOGY OUTCOMES IN WOMEN WITH POLYCYSTIC OVARY SYNDROME: CONVENTIONAL IVF, MILD IVF AND IN-VITRO MATURATION (IVM)

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Objectives: Women with polycystic ovary syndrome (PCOS) are at risk of developing ovarian hyperstimulation syndrome (OHSS) during ovarian stimulation. Interventions to reduce the risk of OHSS in these patients include in-vitro fertilization (IVF) with minimal use of gonadotropin (mild IVF), and retrieval of immature oocytes followed by in-vitro maturation (IVM). The aim of this study was to compare the outcomes of conventional IVF, mild IVF and IVM in women with PCOS undergoing assisted reproductive technology (ART).

Method: Records of women with PCOS who underwent ART between July 2012 and October 2014 were reviewed. In total, there were 51 conventional IVF cycles, 70 mild IVF cycles and 23 IVM (with/without gonadotropin priming) cycles. The treatment proto-