

Introduction

The goal of the OMF surgery curriculum is to provide high quality undergraduate education for dentistry student in order to enable them to evaluate and manage patients in need of tooth extraction and simple surgical procedures. Since the scope of OMF surgery is extensive and includes the diagnosis and management of facial injuries, head and neck cancers, salivary gland diseases, facial disproportion and esthetics, facial pain, temporo-mandibular joint (TMJ) disorders, impacted teeth, cysts and tumors of the jaws as well as numerous problems affecting the oral mucosa such as mouth ulcers and infections and simple tooth extractions, the undergraduate curriculum for OMF surgery is meant to cover both theoretical and practical aspects of this field for a general dentist.

Main emphasis on surgical training is at the 3rd to 6th years of dental curriculum (6th to 11th semesters). The department is also active in Sina, and Shariati hospitals as well as cancer institute and children medical center in Tehran and offers post graduate educations to 30 residents of OMF surgery annually.

The department also presents 4 fellowship programs including Traumatology, Esthetic Surgery, Pathology and Craniofacial Surgery.

Primary aim

Students should earn the thorough knowledge of surgery principles and should learn the basic skills for simple surgical procedures as well as diagnosis and management of patients with broad range of surgical problems and to integrate this knowledge and skills into the whole dental care. They are expected to learn how to adhere to professionalism, respect and correctly communicate with faculty, patients, staff and colleagues, adhere to infection control principles and bioethics, seriously carry out their responsibilities towards their patient's oral health.

Main objectives

Students should acquire the knowledge of:

- Local anesthetics
- Principles of surgery
- Principles of wound healing
- Surgical tools
- Principles of simple extraction of erupted teeth and post-operative care

Theoretical Credits	2 (T)	34			1 (T)	17	-	-
Preclinical Training	2(P)	68					-	-
Clinical Training	-	-	1(p)	34	2 (P)	68	2 (P)	68

(T)= Theoretical; (P)= Practical

Integrated courses

Course	Credits	Hours	Number of sessions	Departments involved
Traumatology	1(T)	17	7	<i>OMF Surgery</i> , Pediatric Dentistry, <i>OMF Radiology</i> , Endodontics
Pain and pharmacology in dentistry	1(W)	51	12	Endodontics, <i>OMF Surgery</i> , <i>OMF Medicine</i>
Geriatric dentistry	0.5(T) 0.5(P)	17	2	<i>OMF Medicine</i> , <i>OMF Surgery</i>
Systemic diseases 3	0.5(T) 0.5(p)	26	6	<i>OMF Medicine</i> , <i>OMF Surgery</i>
Systemic disease 4	1(P)	30	10	<i>OMF Medicine</i> , <i>OMF Surgery</i>
Infection control	1(W)	51	5	Infectious Disease, <i>OMF Medicine</i> , <i>OMF Surgery</i> , Operative Dentistry, Endodontics, Prosthodontics, <i>OMF Radiology</i> , Orthodontics, Community Oral Health
Temporomandibular joint	1(W)	51	5	Prosthodontics, <i>OMF Surgery</i> , <i>OMF Medicine</i> , <i>OMF Radiology</i>
Dental implant	1(T) 2(P)	17 68	6 3	Prosthodontics, Periodontics, <i>OMF Surgery</i>
Diagnostic dentistry1	0.5(T) 0.5(p)	25	2	<i>OMF Medicine</i> , <i>OMF Surgery</i>
Diagnostic dentistry3	2(T)	34	1	<i>OMF Medicine</i> , <i>OMF Pathology</i> , <i>OMF Surgery</i>
OMF anomalies	1(T)	17	9	<i>OMF Medicine</i> , <i>OMF Pathology</i> , Orthodontics, <i>OMF Radiology</i> , Dental Biomaterial, Prosthodontics, <i>OMF Surgery</i>
Comprehensive dentistry 1	2(I)	136	All	Restorative Dentistry, Endodontics, Periodontics, Prosthodontics, <i>OMF Medicine</i> , <i>OMF Surgery</i> , Community Oral Health
Comprehensive dentistry 2	2(I)	136	All	Restorative Dentistry, Endodontics, Periodontics, Prosthodontics, <i>OMF Medicine</i> , <i>OMF Surgery</i> , Community Oral Health

Methods of Learning / Teaching

- **Theoretical knowledge**
 - Lectures using Power Point presentations and videos
 - Virtual teaching
- **Preclinical practice**

Preclinical training is divided into two separate courses: local anesthesia and clinical surgery 1.

- Local anesthesia is presented in 5th semester. In the practical credit they practice different techniques of LA injections on models and on each other. Besides clinical simulations, they observe senior students to learn appropriate clinical behavior.
- Introduction to clinical practice: Clinical OMF surgery 1 is presented in the 6th semester. This training course consists of simultaneous theoretical and practical training in our simulation lab. They pass a simulation training program using phantom heads for practicing LA injection and suturing and extraction techniques. They also become familiar with surgical tools and principles of prescription writing.

Methods of teaching consist of:

- Lectures using power point presentations and videos
 - Demonstrations in small groups
 - Giving formative feedbacks according to direct observations and midterm quizzes
- **Clinical training**

Clinical training starts from the 8th semester and continues up to 11th semester.

Methods of teaching consist of:

- Demonstrations in small groups
- Supervised clinical patient treatment
 - Extraction of single rooted teeth in clinical OMF surgery 2 (including anterior teeth and premolars)

- Extraction of multi rooted teeth in clinical surgery 3(including premolars and molars)
- Attending in operating theatre and OMF surgery clinics in hospitals
- Complex extractions and Surgical extraction of teeth and limited minor surgeries in clinical surgery 4
- Direct observation
- Giving formative feedbacks

Clinical practice: in 4th, 5th and 6th year the whole class is divided into groups of 10 to 13 students. Each group visit OMF surgery department for 32 hours a week in 4 week blocks in these 3 years. Their education includes clinical demonstrations, interactive seminars and supervised clinical patient care. On 4th year, they mostly focus on simple extraction of single rooted teeth. On 5th year, they focus on simple extraction of multi rooted teeth and assist in more complicated surgeries. On 6th year, they focus on complex extractions and perform limited minor surgeries. They also practice surgical extraction of erupted teeth and semi impacted and impacted teeth besides managing emergency situations including I&D of odontogenic infections and management of dental trauma.

Assessment methods

	Final exam		Clinical practice	Preclinical practice	projects
	Written	Oral			
Theoretical Courses	% 100	-	-	-	
Preclinical Courses	% 50	-	-	% 50	
Clinical Courses	% 40	-	% 50	-	10%

Note: Both the student's acquired skills and theoretical knowledge are assessed during preclinical and clinical activities

Strengths

- Good combination of experienced surgeon and young surgeons as academic staff
- Well trained and experienced academic staff
- Early and ongoing learning from 6th to 11th semesters
- Strengthening and practicing professional ethics

- Almost adequate number of academic staff
- good clinical facilities
- Adequate number of patients
- Proper triage of patients for different clinical courses
- Acquiring frequent feedbacks from students
- Providing a safe learning environment
- All research projects done in the department are thoroughly evaluated in the research committee of the department and must be approved before initiation.
- Student exchange
- Holding international summer school programs
- Providing written exam blueprints for more effective learning
- Exposure to hospital setting
- Opportunity to observe more complex surgeries performed by residents
- Resident exchange with European universities
- Residents are involved in undergraduate training

Weaknesses

- Especially in complex patients in which mishaps have occurred students only see the short-term results
- The lack of computer based archive system for patients
- Lack of chair side dental nursery and hygienist support
- Not performing more complex surgeries by students

Innovation and Best Practices

- Students have the opportunity to attend operating rooms and grand round of maxillofacial surgery department in hospitals to get more familiar with the fields covered by maxillofacial surgery

Plans for Future Changes

- Providing more equipment and facilities for our simulation lab
- Introducing and teaching new technologies in the field of surgery to students