

Scope of Maxillofacial Surgery as Recognized by Dental Practitioners and Dental Students in Sulaimani

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Abstract

Objective: To find the knowledge of dental professionals and dental students of Sulaimani on scope and duties of maxillofacial surgeon.

Methods: A specific questionnaire designed and developed after several experts have been consulted for validation. The questionnaire involved five major duties of maxillofacial surgeon (trauma, pathology, aesthetic, temporomandibular joint problem and congenital disorder). After explanation, the questioners were answered by dental students in College of Dentistry, University of Sulaimani and dentist (general dental practitioners and specialist). Two hundred questionnaires distributed among dentists and dental students (100 for each group). Every responder was questioned for 32 different type of maxillofacial problems, meanwhile he /or she asked to choose a relevant specialty he /or she is going to refer or to consult for that each specific question.

Results: Generally maxillofacial surgery moderately addressed for trauma and aesthetic surgery conditions and highly addressed for pathological, pain management and congenital disorders by both groups. Majority of dental practitioners with different specialties in field of dentistry and dental students to some extend are acquainted with maxillofacial surgery and the related details of the field.

Conclusions: Maxillofacial surgery scope of work in the field of aesthetics and trauma surgery still not well recognized by the responders and even some where underestimated. In the fields of pathology, pain management and congenital anomaly is well recognized and comparable to the results of other countries.

Keywords: *Maxillofacial Surgery, Scope of work, Dental practitioner, Dental student, Sulaimani.*

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Introduction

Maxillofacial surgery specialty (MFS) considered as a branch of general surgery that driven from dentistry, in another word it is a combination of dentistry and surgery. This scope of work still not well recognized and understood by dental health care providers⁽¹⁾. MFS specialty has been defined by the American Association of Oral and maxillofacial surgery (1948) as the specialty of dentistry that includes the diagnosis, surgical and adjunctive treatment, injuries and defects involving both the functional and the aesthetic aspects of the hard and soft tissues of the oral & maxillofacial region⁽²⁾. Although MFS has a root in dentistry and include different treatment modalities (congenital anomalies, trauma, pathological, aesthetic and reconstruction), in mouth, face and neck⁽¹⁾. Oral & maxillofacial surgery is a specialty of dentistry, but the typical oral surgeon functions more like a hybrid between medicine and dentistry⁽³⁾.

In the field of medical care services, many specialties and subspecialties are newly established and all need to be recognized and make the health seekers and health care professionals familiar with them⁽⁴⁾. Likewise researches in other countries done among public and health care providers to know their knowledge regarding the health services that provided by maxillofacial surgeons, or even to know if lay people ever heard about this specialty or not⁽⁵⁾. The purposes of this study are to find background knowledge of dental students and dental professionals in Sulaimani on MFS scope and works performed by maxillofacial surgeon.

Material and methods

The study used a specified questionnaire designed to ask specific questions to respondents who are either dental students or dentists, regarding different health problems and which specialist can deal with those health problems as far as they know. This study is conducted in Sulaimani city, Kurdistan region/Iraq. 4th and 5th stage dental students in College of Dentistry, University of Sulaimani have invited to join the study. Furthermore, general dental practitioner and specialist dentist also have invited to participate in the study. The samples were collected randomly and verbal consent were taken before starting, aid provided to the respondents whenever necessary such as not understanding the questions properly. The study approved by ethical committee of College of Medicine, University of Sulaimani.

A specific questionnaire designed and validated by experts in the field to involve all required information

from socio demographic status of the responder to detailed questions.

The questionnaire designed to give name of medical conditions that are according to national⁽⁶⁾ and international⁽⁷⁾ guidelines and standard maxillofacial surgery text books⁽⁸⁾ can be managed by maxillofacial surgeons, and the answer is in a form of marking a box that corresponds to the relevant specialty that respondent chooses.

The Questionnaire consist of 32 questions about different conditions and respondent had to select one from five specialists to treat that condition or doesn't who will choose. These 32 questions grouped as 5 different domains: trauma, pathology, tempromandibular joint problems, congenital disorders and aesthetics.

Statistical analysis

The data were entered according to response and chi square test use to find statistical significant difference when necessary. P value is less than 0.01 considered as highly significant, between 0.01 and 0.05 is significant, and more than 0.05 is statistically not significant.

Results

Two hundred participants have taken part in the study (100 from dentists and 100 from dental students), male and female participants were fairly equal, and the difference in answering was not statistically significant, also difference between age groups was also not significant. As many respondents were answered two or more options and some forgot or not answered many options, conclusively 140 questionnaire forms properly answered and analyzed.

The respondents view and questions are arranged in four tables to apprehend and analyze it easier as follow: In (Table 1) which carries responder's information on trauma treatment by different specialties, shows that they believe that trauma to the orofacial region is mostly treated by maxillofacial surgeons especially fractures of the mandible which all have consensus.

In (Table 2) which reflects the responders view on pathological lesion of the orofacial region again most of them chose MFS to deal with the situations, while in (Table 3) where aesthetic surgeries brought in to discussion, here the opinion being different, some chose plastic surgeon, some otolaryngologist and some MFS, and also different opinions for different kinds of conditions are apparent.

Table 1: Responders view on treatment of type of trauma by different specialist.

Trauma	Plastic Surgeon	ENT	Neurosurgeon	Ophthalmologist	MFS	I don't know
Lacerated wound on face	67		3		69	1
Lacerated tongue	28	7	6		95	4
Facial reconstruction	59				75	6
Bone grafting	44	6			88	2
Fractured orbital walls	8	8	17	26	70	7
Fractured frontal sinus	19	36	7	7	71	
Fractured nose	17	72			51	
Fractured mandible					138	2

Table 2: Responders view on treatment of type of pathological lesions by different specialist.

Pathology	Plastic Surgeon	ENT	Neurosurgeon	Ophthalmologist	MFS	I don't know
Cancer on tongue		3			135	2
Cancer on sinuses	6	24			107	3
Cancer extending to orbit	7	18	35	29	51	
Cancer in the base of skull			58	12	61	9
Mass on parotid		11			129	
Facial swelling	12	9	9	5	105	
Neck dissection	10	22			91	7

Also in (Table 4) which conveys information respondents' opinion of TMJ and congenital problems again in TMJ problems, most of them chose MFS, meanwhile for cleft lip and palate some chose plastic surgeon too, and in case of sleep apnea they chose ENT and MFS equally.

In the field of trauma when results noticed, it can be realized that most of responders believe that facial trauma is managed by maxillofacial surgeons except in case of nasal fracture where mostly they believe that otolaryngologist can manage it more.

While in case of pathological conditions which affect oral and maxillofacial region, mostly they recommend

maxillofacial surgeon to play a major role in the treatment.

Another important contemporary controversial subject which is the facial aesthetic and plastic surgery, that is brought in to comparison, and in most instances responders are equally divided between maxillofacial and plastic surgery supporters, except in case of genioplasty which is here maxillofacial supporters are more.

When results noticed apparently, plastic surgery and maxillofacial surgery are seeming to be competitors, so the results in some fields underwent analysis by a statistical method and Chi-square test presented as Table 5,6,7 and 8.

Table 3: Responders view on Aesthetic treatment by different specialist.

Aesthetics	Plastic Surgeon	ENT	Neurosurgeon	Ophthalmologist	MFS	I don't know
Brow lifting	81			5	54	
Facial fillers	77	15			45	3
Cranioplasty	33	2	48		55	2
Otoplasty	51	42			47	
Face lift	78				60	2
Laser surgery	67				72	1
Laser resurfacing	73				61	6
Rhinoplasty	23	70			47	
Small chin	21				119	
Sagged eye lids	23			55	55	7

Table 4: Responders view on treatment of type of TMJ and congenital problems by different specialist.

TMJ & Congenital	Plastic Surgeon	ENT	Neurosurgeon	Ophthalmologist	MFS	I don't know
Inability to open mouth fully		2			138	
TMJ surgery					140	
TMJ disorder					140	
Facial asymmetry	7				131	2
Cleft lip and palate	31	8			101	
Abnormal head shape	13		27		99	1
Sleep apnea		47	14		47	32

Table 5: Responders view on treatment of type of trauma by plastic and maxillofacial specialists.

Trauma	Plastic Surgeon	MFS	P-Value
Lacerated wound on the face	67	69	< 0.00001
Lacerated tongue	28	95	
Facial reconstruction	59	75	
Bone grafting	44	88	
Fractured orbital walls	8	70	
Fractured frontal sinus	19	71	
Fractured nose	17	51	
Fractured mandible	0	138	

Using the Chi-square statistic is 46.5564. The P-value is < 0.00001, the result is significant at $P < 0.05$.

Table 6: Responders view on treatment of type of pathological lesions by plastic and maxillofacial specialists.

Pathology	Plastic Surgeon	MFS	P-Value
Cancer on tongue	0	135	0.0014
Cancer on sinuses	6	107	
Cancer extending to orbit	7	51	
Cancer in the base of skull	0	61	
Mass on parotid	0	129	
Facial swelling	12	105	
Neck dissection	10	91	

Using the Chi-square statistic is 7.9574. The P-value is 0.093151, the result is not significant at $P < 0.05$.

Table 7: Responders view on Aesthetic treatment by plastic and maxillofacial specialists.

Aesthetics	Plastic Surgeon	MFS	P-Value
Brow lifting	81	54	
Facial fillers	77	45	
Cranioplasty	33	55	
Otoplasty	51	47	
Face lift	78	60	
Laser surgery	67	72	
Laser resurfacing	73	61	
Rhinoplasty	23	47	
Small chin	21	119	
Sagged eye lids	23	0	

Using the Chi-square statistic is 15.9779. The P-value is < 0.003049 , the result is significant at $P < 0.05$.

Table 8: Responders view on treatment of type of TMJ and congenital problems by plastic and maxillofacial specialists.

Variables		Plastic Surgeon	MFS	P-Value*
TMJ problems	Inability to open mouth fully	0	138	
	TMJ surgery	0	140	
	TMJ disorder	0	140	
Congenital disorders	Facial asymmetry	7	131	
	Cleft lip and palate	31	101	
	Abnormal head shape	13	99	
	Sleep apnea	0	47	

Discussion

As stated earlier, maxillofacial surgery is a new specialty comparably with its competitors in the orofacial region, and hence it is not well recognized by the community and health care providers as well⁽⁹⁾. Numerous researches have conducted in different locations of the world to evaluate the amount recognition of MFS specialty by dental professionals, medical professionals and communities. The current study aimed to find out the extent of knowledge of the dental health professionals in Sulaimani city, regarding the scope of maxillofacial specialty, and compare the results with miscellaneous results in the rest of the world.

This study is a survey in a descriptive quantitative form and data collection and presented in form of four tables and analyzed statistically by various chart tables to give a clue and a conclusion regarding the theme of the research.

Ameerally (1994)⁽¹¹⁾ was the pioneer of a similar and stated that if patient is to receive optimal oral and facial problems, dental and medical practitioners need to have a better understanding of what our specialty has to offer. Also they have to be informed of the importance of this specialty in the management of complex and diverse problems within a well-defined anatomical area⁽¹⁰⁾.

Here we realized that majority of dental students and dental practitioners do know maxillofacial surgery, but the scope and range of this specialty is not well understood but actually it is promising⁽¹¹⁾. Hunter et al, in their research, stated that; most health care professionals heard about maxillofacial specialty but small number of them know the exact determinations of this specialty⁽¹²⁾.

Likewise, in the rest of the world this specialty is challenging hard to be recognized. Educating dental students to better know the scope of this specialty is helpful, while arranging seminars, workshops and conferences are also good tools⁽¹³⁾. Involving in mass media and social media may also raise the awareness of dental students and dental practitioners meanwhile affecting the awareness of the community as well.

However, the scope and exact array of this specialty is not fully understood but as a matter of fact it is promising and showing potential for future understanding about the scope of maxillofacial surgery.

Conclusion

Current responders view was carrying a fairly optimistic understanding of our dental care professionals toward the scope of maxillofacial surgery, but yet further work for introduction in form of undergraduate lectures, seminars, symposiums and broadcasting in mass and social media is necessary to reach the level of acceptance.

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