Original Article

COMORBIDITIES IN ORAL & MAXILLOFACIAL SURGERY PATIENTS: A HOSPITAL BASED STUDY

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ABSTRACT

Objective: *To provide local data about the comorbidities present among patients requesting dental treatment so that the patients' medical conditions be assessed properly and dental management modified accordingly to avoid the occurrence of medical emergencies in dental practice.*

Materials and Methods: *A total of 100 patients reporting to the Department of Oral and Maxillofacial Surgery were included in this study regardless of age and gender. A written permission from the institutional research ethical committee will be obtained. After taking consent, a detailed history will be taken and patient examined regarding the systemic conditions other than maxillofacial diseases such as cardiovascular, endocrine, respiratory, hematologic, neurological, infectious, skeletal, gastrointestinal, renal and other remarkable diseases. Information so collected on a specially designed proforma will be analysed using SPSS version 17.*

Results: *The most common chief complaint reported by the patients was the need for extraction (45%) and pathologies (19%). Eighty five present patients were having multiple co morbid diseases while 15% were having single disease. The most frequently encountered disease categories in isolation were diabetes mellitus and Hepatitis C infections (20% each). Combination co morbidities comprised 15% of the total sample size. Diabetes mellitus and Hypertension were the most common combined co-morbidities (33.3%).*

Conclusion: *The results of this study confirm that there is significant prevalence of patients with medical conditions requesting dental treatment. This is an important issue regarding patient health care. In dentistry, the curriculum may require modification towards a more medically oriented dental education. Knowing about the interplay between oral and systemic diseases and medications will help the dental practitioners to avoid or resolve the life-threatening situations that may occur during dental treatment.*

Keywords: *Maxillofacial Surgery, Co-morbidities, Systemic disease*

INTRODUCTION

Oral and maxillofacial conditions are not uncommon and pose a key place in medical care. This fact is evident when the patient seeking oral health care report with systemic illness or disability[1]. Oral diseases can have a profound impact on general health, while problems related to general health can frequently manifest themselves in the mouth. This relationship has been extensively mentioned in the literature, by scientific societies and Journals dedicated to this area of specialization[2]. Patients seeking dental care do not always report their past medical history, usually because they do not consider it important, or do not relate it to their dental problems[3]. Some of these medical problems which may exist are hypertension, cardiovascular, neurological, endocrinological, infectious and blood diseases[3].

Studies on the prevalence of systemic diseases have shown that 64.2% of the subjects have one or more systemic conditions. Dhanuthai[4] reported 12.2% prevalence of medically compromised conditions in dental patients. Smeets[5] revealed prevalence of 28.2%. The cardiovascular diseases were found to be the most prevalent medically compromised conditions (57.87%) affecting oral and maxillofacial surgery patients and their treatment[6]. Endocrine disorders, majority of which were diabetes mellitus, showed sec-

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ond highest prevalence (35-73%) followed by respiratory disorders (3.20%), skeletal disorders (1.87%), gastrointestinal disorders (1.60%), renal disorders and drug allergy (1.33%) and liver disorders (0.53%) respectively.[1,6,7] Although medical emergencies are rarely encountered in dental practice, they, however can occur during or as a consequence of a dental procedure and may have a fatal outcome.[3,8,9]

The objective of this study is to provide local data about the comorbidities present among patients requesting dental treatment so that the patients medical conditions be assessed properly and dental management modified accordingly so as to avoid the occurrence of medical emergencies in dental practice. The aim is also to emphasize on the awareness of dental practitioners about the medically compromised conditions in patients reporting in oral and maxillofacial surgery to seek adequate dental treatment.

MATERIALS AND METHODS

A total of 100 patients reporting to the Department of Oral and Maxillofacial Surgery be included in this study regardless of age and gender. A written permission from the institutional research ethical committee was obtained. After taking consent, a detailed history was taken and patient examined regarding the systemic conditions other than maxillofacial diseases such as cardiovascular, endocrine, respiratory, hematologic, neurological, infectious, skeletal, gastrointestinal, renal and other remarkable diseases. Information so collected on a specially designed Performa will be analysed using SPSS version 17.

RESULTS

Out of 100 patients, 53% were male and 47% were females with a male to female ratio of 1.12:1. Age distribution of these patients was such that majority of patients were in age group 41-50 years followed by 51-60 years. Details of age distribution is presented in table 1.

The most common chief complaint reported by the patients was the need for extraction (45%) and pathologies (19%). The detail of chief complaints and their prevalence is mentioned in table 2. Out of 100 patients 85% were having multiple co morbid diseases while 15% were having single disease. The most frequently encountered disease categories in isolation were Diabetes mellitus and Hepatitis C infections (20% each) followed by hypertension (14.12%). Details of isolated comorbidities are given in table 3.

Table 1: Age Distribution

Age in Years	n	%
10-20	7	7
21-30	17	17
31-40	21	21
41-50	25	25
51-60	22	22
61-70	6	6
70 & above	2	2
Total	**100**	**100**

Table 2: Chief Complaints

Complaints	n	%
Exodontia	45	45
Pathologies	19	19
Trauma	17	17
Infections	7	7
Ankylosis	4	4
Neuralgias	4	4
Others	4	4
Total	**100**	**100**

Table 3: Isolated Co Morbidities (N=85)

Morbidities	n	%
Diabetes	17	20.0
Hepatitis C	17	20.0
Hypertension	12	14.12
Cardiac	9	10.59
Pregnancy	9	10.59
Hepatitis B	6	7.06
Renal	5	5.89
Thyroid	4	4.71
Blood	3	3.52
Others	3	3.52
Total	**85**	**100**

Table 4: Combined Co Morbidities (N=15)

Morbidities	n	%
Multiple	6	40
Diabetes +HTN	5	33.33
Cardiac+UTI	2	13.33
Diabetes+ Cardiac	1	6.67
Diabetes +HCV	1	6.67
Total	**15**	**100**

Combination co morbidities comprised 15% of the total sample size, of them majority were multiple diseases in a single patient (40%) followed by diabetes and hypertension together (33.33%). Details are given in Table 4.

DISCUSSION

Advances in modern medicine have resulted in the improved quality of life of people with significant medical conditions[10]. Many patients requesting dental care have a significant medical condition that may alter the course of their oral disease as well as the treatment provided[11]. Since these patients have a greater than normal risk of developing surgical complications, the clinician must be able to recognize and treat such cases as safely as possible. It requires more extensive knowledge of oral and physical medicine to provide quality care and appropriate treatment for such medically compromised patients. A thorough medical history is important to identify patients with medically compromised conditions and to determine the appropriate precautionary measures needed to ensure patients' safety during surgery[10,12].

The present study demonstrated male preponderance in most of the cases. Our results of gender distribution were similar to previous studies[1]. This may be suggestive of the fact that males pay less attention to both general health and oral health than females[12].

Majority of the patients reporting with co morbidities fell in the age group of 41-50 years followed by 51-60 years in present study. The results correlate with the studies of Almas[10] and Meloto[11] which reported high prevalence of systemic diseases in elderly. Another study by Joseph[13] also reported the prevalence of dental problems along with systemic diseases in patients with the same age range. Taking into account that some of the systemic diseases have specific early and particularly aggressive oral manifestations, this could well explain the high prevalence of these diseases in patients less than 65 years of age requesting dental care in our hospital.

In the present study the most common dental problem reported by the patients was a need for dental extractions (45%) followed by oral pathologies (19%). Trauma was the third most common chief complaint reported by patients in maxillofacial surgery (17%). However the results do not correlate with a previous study carried out by Rehman et al[14] which showed the prevalence of trauma cases to be the highest (36.32%) followed by exodontia (35.96%) and pathologies (15%). Our result of maxillofacial trauma is slightly on a lower side, reason being patients with maxillofacial injuries having co-morbid conditions are admitted to other wards and hospitals for pre trauma management of such diseases.

The most common co morbidity encountered in the present study was Diabetes Mellitis both in isolation and combination with other systemic diseases. The results correlate with the study carried out by Almas[10] which also reported diabetes to be the most commonly encountered systemic disease in dental patients. However the study by Bhateja[1] reported Diabetes to be the second most common co morbidity after cardiovascular diseases. Feijoo et al[3] reported the prevalence of diabetes to be 13.7%.

Hepatitis C was also found to have the same prevalence (20%) as diabetes mellitus in our study. The results are in correlation with the study of Laheij et al[15] which reported the prevalence rate of hepatitis C between 20-30%.

Cardiovascular diseases, the majority of which were hypertension were reported to be the third common co-morbidity in the present study as isolated in 12% cases and as combined co morbidity in 33.33% cases. Bhateja[1] and Feijoo et al[3] however reported cardiovascular problems to be the most prevalent medically compromised conditions in dental patients. The difference in our results and previous studies may be attributed to the fact that majority of the patients in our set up are primarily undiagnosed as being hypertensive unless detected during measures carried out in dental hospitals regarding concurrent medical conditions.

CONCLUSION

The results of this study confirm that there is significant prevalence of patients with medical conditions requesting dental treatment. This is an important issue regarding patient health care. In dentistry, the curriculum may require modification towards a more medically oriented dental education. Knowing about the interplay between oral and systemic diseases and medications will help the dental practitioners to avoid or resolve the life-threatening situations that may occur during dental treatment.

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