

## CO-MORBIDITIES RELATED TO DENTAL EXTRACTIONS

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### ABSTRACT

*In the department of oral and maxillofacial surgery at the Institute of Dentistry (LUMHS) Jamshoro cross sectional survey was done in order to detect the occurrence of comorbidities in patients older than 30 years of age as this age group being more vulnerable to dental extraction led by those comorbidities. During the period of eight months from April 2016 to November 2016 a total of 2520 patients visited the oral surgery OPD of (LUMHS). In this study the medical and drug history of 768 patients was recorded on predesigned history sheets to find out various medical problems including hypertension, diabetes mellitus, hepatitis, compromised cardiac function and asthma. Among sample of 768, 359(46.8%) were males and 409 (53.2%) were females. Age ranged between 30 to 80 years. Out of these 54% were in 4th and 6th decade of life. Comorbidities were found to be among 246 (32%) of the patients.*

*In this study, the most widespread co morbidity was hypertension accounting for 113/768 (14.7%) patients followed by diabetes mellitus 63/768 (8.20%) It is a common observation that patients having deteriorating diseases also present simultaneously other co morbid conditions. Like insomnia and anxiety are associated with depression and dental treatment phobias and hypertension are usually found among diabetics as co morbidities.*

**Key Words:** Dental extractions, hypertension, cardiac disease, diabetes melitus.

### INTRODUCTION

In an elongated and discrete form of medical history, we come to know that comorbidities are consequent to poorer health, complex treatment and increased health care costs. The word “co morbidity” may be misconceptualized. It could be proper interpreted by different words or phrases like presence of one or more additional diseases, multimorbidity and morbidity burden and patient difficulty.<sup>1</sup> Co-morbidity was defined by Feinstein as “any distinct clinical entity that has co-existed or that may occur during the clinical course of a patient who has the index disease under study”.<sup>1</sup> Occurrence of primary disorder, illnesses along with additional disease either mental or behavioral is known as Co morbidity.<sup>2</sup> For

the better prognosis of individuals suffering from co existing diseases health care providers address better and well equipped management.<sup>3</sup> Provision of safe and effective management of dental problem without causing any medical emergency is the basic aim of dental treatment. Which sometimes necessitates the treatment modification and availability of consultant according to co morbidity of the patient.<sup>4</sup> Proper medical history taking is the primary requisite for safe and successful dental treatment.<sup>4</sup> Literature shows the occurrence of medical comorbidities up to 64.2% alone or in combination. Dhannuthai reported 12.2% prevalence of comorbidities in dental patients.<sup>5</sup> Whereas 28.2% by Smeets and 73.3% by Maryam and colleagues.<sup>6</sup> Cardiovascular diseases were found to be the most common medically compromised conditions (57.87%) followed by endocrine disorders (35-73%), and numerous other systemic diseases in oral and maxillofacial surgery patients.<sup>7,8</sup> Medical emergencies are uncommon in dental practices, but often faced as an outcome of a dental procedure and that could be lethal sometimes.<sup>9</sup> The aim of the study is to identify the most common co morbid diseases encountered in our hospitals during dental extraction and provide safe and effective dental treatment.

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## METHODOLOGY

This study was conducted at the Department of Oral and Maxillofacial Surgery (LUMHS) Institute of Dentistry Jamshoro from April 2016 to November 2016. Collectively 2520 patients visited Dental OPD at LUMHS during the course of data collection. Examinations of 768 patients older than 30 years were accounted in this assessment. General and dental history was recorded by dental expert for each patient on predesigned detailed history Proformas.

Therapeutic and medication history of patient had been recorded it was important to know the occurrence of different medicinal conditions like diabetes mellitus, hypertension, hepatic diseases, cardiac disorders as well as smoking and dietary propensities of the patient. Whole information was recorded in Microsoft Excel Spread sheet and were analyzed utilizing SSPS 20.0.

## RESULTS

From April 2016 to November 2016 summative assessment of 2520 patients was done who came to the oral maxillofacial surgery OPD. Number of patients having comorbidities was 246 (32%) out of 768. Patients with age ranged from 30 to 80 years were found to have more than one severe disease with advancement of age. Most of the patients found with collateral systemic illnesses were in their fourth decades of life. Male patients were 359 (46.8%) and number of female patient was 409 (53.2%).

In this analysis, the most frequent co-morbid condition found was hypertension representing 113 (14.7%) out of 768 subjects, the second most common disorder was found to be diabetes mellitus 63 (8.20%) patients. Patients with cardiac diseases were 46 (5.89%) patients with GIT problems were reported as common as 24 (3.12%).

In fourth decade of patients' life hypertension was found usual while diabetes mellitus was primarily seen among patients in their sixth decade of life. Among the

third to fourth decade of life, peptic ulcer was the main issue noted. Moreover, male patients were largely seen in their 5th to 6th decade of life while females were confronting the same issues with the beginning of 4th decade of their life.

## DISCUSSION

For the safe and effective management, patients' proper medical history is important.<sup>4</sup> In order to achieve this, detailed history about patients' systemic diseases, past history and oral habits, the history Proformas were used as main source.

Treatment modification is required, if patient is suffering from any medical or systemic illness during dental surgical procedure. Traditionally, in dental practice two most common methods have been employed for medical history taking, one is patient's self-reported and other is through interview.<sup>10</sup> The incidence of comorbidities increases with increasing age. Mostly patients 41-50 years present with some medical problems, which is evident from other studies also.<sup>11,12</sup> As discovered by national health survey, one out of every three individuals aged 45 is hypertensive.<sup>13</sup> Delayed wound healing subsequent to dental surgical procedure, increased caries rate and periodontal diseases have been reported due to uncontrolled diabetes.<sup>14</sup> Patients suffering from hepatitis B, C and TB require special precautions during dental surgical treatment to prevent cross infection. During administration of local anesthesia anxiety reduction protocol is compulsory or alternate means can also be considered to anesthetize i.e. sedation or general anesthesia to avoid vasovagal syncope before and during dental treatment. It has been previously reported that rate of syncope increases with fear and anxiety created by dental management.<sup>15</sup>

Similar study has also been conducted, where the age of dental patients who were afflicted with medically compromised conditions ranged from 30 to 80 years.<sup>4,16</sup> Another study conducted at the OMFS

TABLE 1

Overall No. of patients	Pts came for extraction	Male (%)	Female (%)	Pts with comorbidities (%)
2520	768	359(46.8)	409 (53.2)	246 (32)

TABLE 2: PATIENTS WITH CO-MORBIDITIES

Comorbidities	No. of patient	In percentage
Hypertension	113	14.7%
Diabetic mellitus	63	8.20%
Cardiac patient	46	5.89%
GIT problems	24	3.12%

department at IDH, Islamabad show that hypertension was one of the most common diseases affecting people worldwide.<sup>3</sup>

## CONCLUSION

A survey was conducted to determine the frequency of medical co morbidities present in patients visiting the Department of Oral and Maxillofacial Surgery (LUMHS) Jamshoro for Dental extraction. It was found that hypertension and diabetes were more prevalent than other co morbid conditions and occurrence of hypertension increased with age.

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## CONTRIBUTIONS BY AUTHORS

- 1 **Nayab Mangi:** Concept/methodology.
- 2 **Maham Shah:** Data collection/results.
- 3 **Shagufta Channa:** Intro/discussion/conclusion.
- 4 **Sana Siddique:** Proof reading/editing.

## CORRIGENDUM

Reference to article titled "Correlation between curve of spee and vertical eruption of teeth among various groups of malocclusion" published in 'Pakistan Oral & Dental Journal' in Vol 37 No. 1 (March 2017) issue, the contributions made by authors should be read as published below:

**Dr Tayyaba Bibi:** Paper writing, data collection, statistical analysis

**Dr Ahsan Mahmood Shah:** Topic selection, proof reading, statistical analysis.