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Research Article

**FREQUENCY OF MEDICAL CO-MORBIDITIES IN ORAL
SURGERY AND ORTHODONTIC PATIENTS**Dr Zubaida Shireen¹, Dr Saira Qamar², Dr Amjad Liaqat²¹Fatima Memorial College of Medicine and Dentistry, Lahore²De'montmorency College of Dentistry, Lahore**Article Received:** September 2020 **Accepted:** October 2020 **Published:** November 2020**Abstract:**

Introduction: Medical comorbidities have varied effects on the management of a patient for dento alveolar surgeries. **Objectives:** The main objective of the study is to find the frequency of medical co-morbidities in oral surgery and orthodontic patients. **Material and methods:** This cross-sectional study was conducted in Fatima Memorial College of Medicine and Dentistry, Lahore during 2019. A sample of 400 patients who visited the hospital during the study period were selected randomly for inclusion in the study. **Results:** The data was collected from 400 participants. The most common diagnoses were: dental caries (n = 177, 44.3%), screening for dental disorders (n = 21, 5.3%), chronic gingivitis (n = 15, 3.8%), and pulpitis (n = 13, 3.3%). The most common comorbidities in the 400 patients were anemia (n = 45, 11.3%) and diabetes (n = 21, 5.3%) followed by chronic gingivitis (n = 16, 4.0%), and hereditary factor VIII deficiency (n = 12, 3.0%). **Conclusion:** It is concluded that presentation of medically compromised patients in dentistry is inevitable. Proper assessment of co-morbid conditions, in relation with dental procedure and pre or post medication, is a basic necessity.

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INTRODUCTION:

Medical comorbidities have varied effects on the management of a patient for dento alveolar surgeries. Prior diagnosis and prudence in such conditions is of utmost importance for avoidance of complications and overall welfare of the patient. There is a dilemma on the extent of investigations required to evidently ascertain the medical status and fitness of a patient for a dental procedure [1].

In present medical era the presence of comorbid is associated with worse health outcomes, more complex clinical management, and increased health care costs. One single definition and related meaning of the term “comorbid” is not well conceptualized. Many alternate terms such as multimorbidity, morbidity burden, and patient complexity are frequently used. Health care increasingly needs to address the management of individuals with multiple coexisting diseases, which are now the norms rather the exception [2]. Comorbidities and other health status measures are theorized to play a key role in determining health care utilization. Comorbidity 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.” Comorbidity is the occurrence of supplementary illnesses along with a primary illness or disorder; or their effects. The supplementary of illness could be a behavioral or mental problem [3].

People usually do not find any relation between their systemic and dental health, so they are reluctant to report their past medical history. Old age group demands dental treatment with their co-morbid conditions and sometimes consultation with their physician becomes mandatory [4]. Most frequently reported medical co-morbid conditions are diabetes, chronic bronchitis, cardiovascular diseases, hypertension and arthritis. As oral care is particularly important to the general health of elderly patient so, a

detailed medical history is a preventive tool to ascertain the health care of patients by avoiding any medical emergency in dental practices [5].

Objectives

The main objective of the study is to find the frequency of medical co-morbidities in oral surgery and orthodontic patients.

MATERIAL AND METHODS:

This cross-sectional study was conducted in Fatima Memorial College of Medicine and Dentistry, Lahore during 2019. A sample of 400 patients who visited the hospital during the study period were selected randomly for inclusion in the study. Patients’ demographic data and drug utilization data (drug name/type, route of administration, dosage, frequency, and anatomical) were collected from the SQUH electronic medical record system. Different variables recorded for each participant were age, gender and history of medical co-morbid conditions including diabetes mellitus, hypertension, ischemic heart diseases, renal disorders, typhoid, thyroid disorder, degenerative joint disorder, asthma, hepatitis B, hepatitis C, hepatitis A and E, HIV and tuberculosis.

Statistical analysis

The data was collected and analysed using SPSS version 19. All the values were expressed in mean and standard deviation.

RESULTS:

The data was collected from 400 participants. The most common diagnoses were: dental caries (n = 177, 44.3%), screening for dental disorders (n = 21, 5.3%), chronic gingivitis (n = 15, 3.8%), and pulpitis (n = 13, 3.3%). The most common comorbidities in the 400 patients were anemia (n = 45, 11.3%) and diabetes (n = 21, 5.3%) followed by chronic gingivitis (n = 16, 4.0%), and hereditary factor VIII deficiency (n = 12, 3.0%).

Table 01: Common dental diagnoses among study patients

Diagnosis	Frequency, n	Percentage, %
Dental caries	177	44.3
Screening for dental disorders	21	5.3
Chronic gingivitis	15	3.8
Pulpitis	13	3.3
Post-surgical follow up	13	3.3
Partial loss of teeth	8	2.0
Impacted teeth	8	2.0
Temporomandibular joint disorder	8	2.0
Dental examination and cleaning	7	1.8
Others	130	32.5

Table 02: Common medical comorbidities among the study patients

Comorbidity	Frequency, n	Percentage, %
Anemia	45	11.3
Diabetes	21	5.3
Chronic gingivitis	16	4.0
Hereditary factor VIII deficiency	12	3.0
Asthma	7	1.8
Malignant neoplasm of breast	7	1.8
Chronic ischemic heart disease	5	1.3
Acute lymphoblastic leukemia	5	1.3
Chronic periodontitis	4	1.0
Others	121	30.3

DISCUSSION:

Oral health problems may be a manifestation of systemic disease or may significantly influence the health of entire body. Conventional dental treatment alone will not take care of systemic issues. Dentists must have understanding of medical co-morbidities so, they would be able to handle related complications and emergency situations [6]. Before starting any dental procedure, a thorough history and physical examination is essential to assess the physical and mental health status of the patient. In medical technology, modern advancements have increased the life expectancy of patients. Non-invasive procedures are recommended for medically ill dental patients [7]. Unlike a study conducted in Merseyside, UK, in which over 80% of patients came to the dental clinic with a localized dental infection or dental abscess, our study showed that most patients (44.3%) who attended to the clinic were diagnosed with dental caries. In contrast, periodontal and gum diseases were the commonest diagnoses for patients attended a dental clinic in Nigeria (68.1%) [8]. This difference in the pattern of diseases presenting to the dental clinic is reflected in the percentage and type of specific drugs prescribed to these patients in different studies. The most common anatomical class of prescribed drugs in our study was alimentary tract and metabolism. A study conducted in the UK showed that cardiovascular system drugs were the commonest class of drugs seen in dental patients [9]. Among the 400 patients, those who needed analgesics were commonly prescribed paracetamol. Unlike our result, a study in Kuwait showed that the most common analgesic prescribed was diclofenac [10].

CONCLUSION:

It is concluded that presentation of medically compromised patients in dentistry is inevitable. Proper assessment of co-morbid conditions, in relation with dental procedure and pre or post medication, is a basic necessity.

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