PREVALENCE OF MEDICALLY COMPROMISED CONDITIONS IN PATIENTS REQUIRING DENTAL TREATMENT

Nadia Ashraf¹, Muhammad Tariq Mehr²
¹Department of Maxillofacial Surgery, Hayatabad Medical Complex, Peshawar - Pakistan
²Department of Medicine, Hayatabad Medical Complex, Peshawar - Pakistan

ABSTRACT

Objective: To know the associated medical conditions in patients requiring dental services and help enlighten the dental practitioners in light of the co morbidities in our local population.

Material and Methods: This descriptive, cross-sectional study was conducted on a total of 4269 patients reporting to the Dentistry department of Services hospital, Peshawar from December 2012 to February 2014. After taking informed consent from each patient, a detailed history was recorded on a specially designed Performa to find out the prevalence of medical problems in patients requiring dental treatment. The data so collected was analyzed by using SPSS version 21.

Results: Among 4269 patients, 978 (22.9%) patients were afflicted with co morbidities in which 53.2% were female while 46.8% were male. Majority of patients were in age group 51-60 years followed by 41-50 years. The most frequently encountered disease categories in the present study were hypertension (35%) and diabetes mellitus (21.9%) followed by hepatitis (13.6%).

Conclusion: The results of the present study confirm that the prevalence of medical co morbidities is significant in patients requiring dental treatment. Therefore a thorough medical history and careful clinical examination is mandatory before any dental procedure. Continuing education courses should emphasize on subjects like management of medically- compromised patients and medical emergencies. Knowing about the interrelation between systemic and oral diseases will help the dental practitioners to avoid or manage life threatening complications that may occur during dental procedure.

Key Words: Co-morbidities, dental treatment, systemic diseases.

This article may be cited as: Ashraf N, Mehr MT. Prevalence of medically compromised conditions in patients requiring dental treatment. J Med Sci 2016; 24: (3) 145-148.
Prevalence of medically compromised conditions in patients requiring dental treatment

Several studies have been done in the developed countries to show the prevalence of systemic co morbidities in dental patients while on the other hand; there is lack of such scientific data in many developing countries including Pakistan. The aim of the study is to provide local data about the prevalence of medical problems among dental patients and also to emphasize on the awareness of dental practitioners about the co morbidities present in patients requiring dental treatment. This study will help to decrease the frequency of occurrence of medical emergencies in dental practice by allowing the dentist to modify dental treatment according to the patient’s underlying systemic condition.

MATERIAL AND METHODS

This is a cross-sectional descriptive study which was conducted at the Dentistry Department of Services Hospital, Peshawar from December 2012 to February 2014. A total of 4269 patients requiring dental treatment were included in the study regardless of age and gender. A written permission was taken from the institutional research ethical committee. After taking informed consent from each patient, a detailed history was recorded on a specially designed performa to find out the prevalence of medical problems including hypertension, diabetes mellitus, hepatitis, pregnancy, renal, gastrointestinal, cardiac, neurologic, hematologic and other remarkable diseases. The data so collected was analyzed by using SPSS version 21.

RESULTS

A total of 4269 patients were recruited in the study. Among these, 978 (22.9%) patients were afflicted with co morbidities. Figure 1 shows gender distribution of the patients. Age range of the patients at the time of presentation was 14-80 years. Age distribution of these patients is presented in Table 1 while details of the medical co morbidities are given in Table 2.

Table 1: Age wise distribution of the patients

<table>
<thead>
<tr>
<th>Age in years</th>
<th>No. of patients &amp; percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-20</td>
<td>35(3.6%)</td>
</tr>
<tr>
<td>21-30</td>
<td>166(17%)</td>
</tr>
<tr>
<td>31-40</td>
<td>192(19.6%)</td>
</tr>
<tr>
<td>41-50</td>
<td>245(25.1%)</td>
</tr>
<tr>
<td>51-60</td>
<td>284(29%)</td>
</tr>
<tr>
<td>61-70</td>
<td>41(4.2%)</td>
</tr>
<tr>
<td>&gt; 70</td>
<td>15(1.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>978(100%)</td>
</tr>
</tbody>
</table>

Table 2: Prevalence of medical problems in dental patients

<table>
<thead>
<tr>
<th>Medical condition</th>
<th>No. of patients &amp; percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>342(35%)</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>214(21.9%)</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>133(13.6%)</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>95(9.7%)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>68(6.9%)</td>
</tr>
<tr>
<td>Respiratory</td>
<td>32(3.3%)</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>31(3.2%)</td>
</tr>
<tr>
<td>Renal</td>
<td>30(3.1%)</td>
</tr>
<tr>
<td>Hematological</td>
<td>24(2.4%)</td>
</tr>
<tr>
<td>Neurological</td>
<td>9(0.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>978(100%)</td>
</tr>
</tbody>
</table>

DISCUSSION

An easy access to the medical care and advances in medical technology have enabled the population to live longer than before with resulting increased percentage of elder population in a society.11 As the older population is more vulnerable to various systemic diseases.12 The practice of dentistry is becoming more complex and challenging.13 The clinician must have an extensive knowledge and better understanding of the patient’s systemic condition in order to provide safe and quality dental treatment to the patients having systemic co morbidities.7,14

The prevalence of medically compromised conditions in patients requiring dental treatment was found to be 22.9% in the present study. Lakhani et al’ revealed the prevalence of medically compromised patients...
Prevalence of medically compromised conditions in patients requiring dental treatment

from the survey on 1867 dental patients from Karachi, Pakistan to be 23.4%. Abuabara disclo

s the prevalence of medical conditions in Brazilian dental patients to be 26%. Al-Bayaty et al reviewed 571 pa
tients and reported that the prevalence of medical conditions in dental patients was 41.9%.

The present study demonstrated female predominance with the female to male ratio of 1.14:1. This finding correlates with other studies. This finding may be suggestive of the fact that usually females are more conscious to take care of their health (both general and oral health) as compared to males. Majority of the patients were in the age group of 51-60 years followed by 41-50 years. This finding is in accordance with the studies of Dhanuthai and Lakhani who also reported a high prevalence of medical problems in older individuals.

Hypertension followed by diabetes mellitus was found to be the most common co-morbidities encountered in the present study. The results are in agreement with the study of Lakhani who also reported hypertension and diabetes mellitus to be the most commonly encountered systemic diseases in dental patients. This reflects the character of these two diseases which are usually encountered in elderly patients. Maryam et al also demonstrated in their study that cardiovascular diseases were the most frequent medical condition in patients requiring dental treatment in whom hypertension contributes to 33.9% of the total. The reason of high prevalence of hypertension in the present study may be due to the fact that we have measured the blood pressure levels in all patients requiring dental treatment, thus also detecting those patients who had not previously been diagnosed. Our study is not in consonant with Khader et al who reported gastrointestinal diseases as the predominant co-morbidity in their study.

CONCLUSION

Although medical emergencies are rare in dental practice, but they can occur during dental treatment and may have a fatal outcome. The results of the present study confirm that there is significant prevalence of patients with medical condition requiring dental treatment. Furthermore the majority of people in developing countries like Pakistan do not undergo routine medical checkups. As a result, patients have asymptomatic medically compromised conditions. Therefore a thorough medical history and careful clinical examination is mandatory before any dental procedure. Knowing about the interrelation between systemic and oral diseases will help the dental practitioners to avoid or manage life threatening complications that may occur during dental procedure.

RECOMMENDATION

In dentistry, the curriculum may require modification towards a more medically oriented dental education. Continuing education courses should emphasize on subjects like management of medically-compromised patients and medical emergencies.

REFERENCES

Prevalence of medically compromised conditions in patients requiring dental treatment


CONFLICT OF INTEREST: Authors declare no conflict of interest
GRANT SUPPORT AND FINANCIAL DISCLOSURE NIL

AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Ashraf N: Collection of data, analysis of the data and writing of final manuscript.
Mehr MT: Analysis of the data and critical appraisal of the final manuscript.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

The Journal of Medical Sciences, Peshawar is indexed with WHO IMEMR (World Health Organisation Index Medicus for Eastern Mediterranean Region) and can be accessed at the following URL.

http://www.who.int/EMRJorList/details.aspx?docn=4468