Original Article

Oral Health Status of Patients Visiting Islamic International Dental Hospital

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Objective: This study was designed to assess patient's oral health status visiting Islamic International Dental Hospital and to assess relationship of different variables with oral health.

Study Design: Cross sectional study

Place and Duration: It was a conducted at IIMC from September 2011 to November 2011

Materials and Methods: in which 100 patients seeking dental care were randomly selected. A questionnaire was designed and two house officers were calibrated and trained on filling the data sheet and examining the patients. Decayed Missing Filled teeth (DMFT) was applied and a three scale parameter of good, fair and poor was used to evaluate oral health. The relationship of oral hygiene practice with oral health, relationship of systemic diseases with oral health and lastly relationship of age with oral health was also assessed. The data was entered in computer and analysis was done using SPSS version 17. Data analysis included descriptive statistics such as frequency distribution, percentage and cross tabulation. The level of significance was set at 5%.

Results: The results showed that forty patients scored good, thirty six patients scored fair and twenty-four patients scored poor. The mean values of examination variables showed D= 3.28, M= 3.53, F= 3.02, Bleeding on brushing = 1.59 and Bleeding on probing = 1.31.

Patients sticking to good oral hygiene habits scored better than those neglecting their oral hygiene. Patients suffering from systemic diseases scored lower on scale as compared to systemically healthy individuals.

The results also showed that oral health score decreased with increase of age from mean age

Conclusion: Oral health can be improved by improving oral hygiene and reducing habits like smoking etc. Patients with systemic diseases should be motivated for improving oral health as should the patients with advance age.

Keywords: Oral health score, DMFT, Gingival bleeding, Brushing frequency.

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Introduction

The oral health means being free of chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth loss, and other diseases and disorders that affect the mouth and oral cavity. It is an optimal state of mouth and normal functioning of the mouth organ without evidence of disease. Oral diseases, particularly caries and periodontal diseases, burden people in Pakistan excessively. Oral health has low priority in health activities of Pakistan; as a result large proportion of population has untreated oral diseases. Good oral hygiene is the foundation for a healthy mouth and prevents 80% of all dental problems.

The last national oral health survey was conducted in 2003 and it showed that mean DMFT of patients of 12 years was 1.23 and it was increased to 17.18 for the age of 65 and above of the patients in urban population. On the positive aspect of this survey it has been shown that 50% of the children between the ages of 12-15 years are caries free and on the negative aspect it showed that 97% of the entire carious lesion remains untreated.[1, 2]

Since majority of oral diseases are untreated[3] therefore this study was designed to evaluate oral health status of patients seeking oral health care in Islamic International Dental College and Hospital, to assess relationship between oral hygiene practice and oral health. It also assessed relationship between systemic diseases and oral health and lastly to assess relationship of age with oral health score.

Materials and Methods

In this cross sectional study 100 patients visiting Islamic International Dental Hospital were randomly

selected according to inclusion and exclusion criteria mentioned below:

Inclusion Criteria:

1. All permanent teeth should be erupted in oral cavity.
2. Willingness of patients to be a part of study.
3. Both male and female patients seeking dental care.

Exclusion Criteria:

1. Young children with deciduous dentition or during mixed dentition phase.
2. Severe medical illness leading to advanced destruction of oral and periodontal tissues.
3. Mentally handicapped patients.
4. Patients undergoing radiation/chemotherapy.
5. Third molars excluded.
6. Edentulous patients.

A questionnaire was designed and two house officers were calibrated and trained in filling the questionnaire and examining the patient in outpatient department of Islamic International Dental Hospital. All the patients were checked by standard dental diagnostic equipment under artificial light on dry teeth on the dental chair, third molars were exempted from examination and DMFT score was assigned to the patients.[4] The oral health status of patients was judged on a three scale parameter which was good, fair and poor. Patients were given a good score when DMFT score was at or above 23, fair was assigned to patients with DMFT score between 17 – 22 along with presence of gingival bleeding either on probing or on brushing and poor score was given to patients with DMFT score of 16 and below along with gingival bleeding.

The data was entered in computer and analysis was done using SPSS version 17. Data analysis included descriptive statistics such as frequency distribution, percentage and cross tabulation. Chi square test was applied and the level of significance was set at 5%.

Results

Out of these 60 were male and 40 were females. Mean age of patients was 36.34 years with age range from 12 to 68 years. One hundred pateitns were included in this study. The results shown in table I indicate that forty patients scored good, thirty six patients scored fair and twenty four patients scored poor.

Table II shows the mean values of examinable variables Table III shows the relationship of different variables with oral health score. Figure I shows relationship of frequency of brushing with gingival bleeding.

Table: I Oral Health Score (n=100)

Gender	Good	Fair	Poor	Total
Male	21	20	19	60
Female	19	16	05	40
	40	36	24	100

Table II: Mean values of different variables (n=100)

	Decayed	Missing	Filled	Bleeding gums	Bleeding on probing
Mean	3.28	3.53	3.02	1.59	1.31

Table III: Comparison of different variables with Oral health score (n=100)

Variable	Good	Fair	Poor
Medical status			
No systemic disease	58%	38%	4%
Diabetes	11%	22%	67%
Hepatitis	0	50%	50%
Hypertension	38%	50%	12%
CVS disease	0	0	100%
Others	0	50%	50%
More than one	0	18%	82%
Brushing			
Yes	44%	37%	19%
No	0	22%	78%
Habits			
None	56%	35%	9%
Smoking	30%	40%	30%
Beetle nut chewing	0%	50%	50%
Naswar	0%	33%	67%
Others	36%	28%	36%
Previous dental hospital visits			
Yes	38%	35%	27%
No	46%	36%	18%

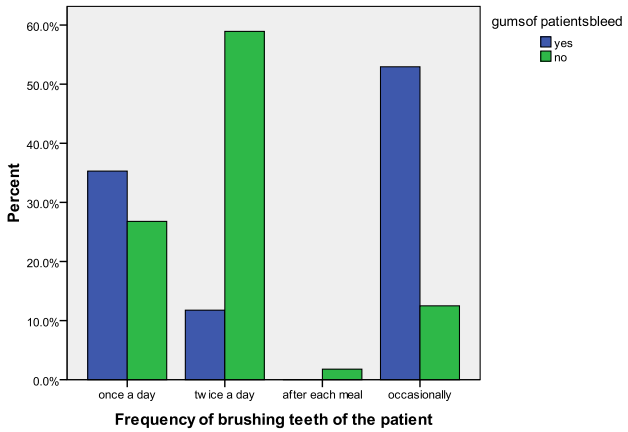

Figure I: Comparison of frequency of brushing with gingival bleeding

Discussion

The results showed that forty patients scored good, thirty six patients scored fair and twenty four patients scored poor. This is shown in frequency figure I.

In males, 21 patients were having good oral health score, 20 scored fair and out of 60 male patients 19 scored poor. Males scored almost equally on all the three scale whereas, females scored more heavily on good and 87% of them were recorded of having a good and fair oral hygiene thus indicating that females are more cautious in maintaining their oral health.

The hypothesis of the study was that there is increase in mean values of DMF due to neglect in oral hygiene and increase in sugar consumption. The study results supported the hypothesis and there was an increase in DMF mean value as compared to mean DMF values presented in oral health survey in 2003**.** The mean values of different variable which were examined on the patients are shown in Table III.

When age was compared with oral health results showed that the patients whose age was near the mean value showed good and fair oral health scores and with the progression of age the oral health score of the patients is more towards poor side. This was inline with national health survey which also showed that with increase of age there was deterioration of oral health.[1] Zhang Q. also showed that DMFT increases with increase in age.[5]

When DMF was evaluated it was observed that the maximum number of decayed teeth was two in 28 patients and minimum seven decayed teeth were present in one patient. In Pakistan sugar consumption has increased from 10 kg/ person/ year in 1977 to 21 kg/ person/ year in 1998.[6] This indicates more spread of dental decay. This was inline with Doherty MA who correlated increase in caries experience with increase in sugar consumption.[7] The maximum number of missing teeth were 2 in 22 patients and a very few number of patients showed 5 or higher number of missing teeth. The maximum numbers of filled teeth were 2 in 12 patients and minimum of 6 teeth were filled in 2 patients.

Table IV represents percentage of different variables with oral health score and it shows that 58% of the systematically healthy patients scored good on oral health score. 82% of patients with more than one disease scored poor on oral health score. Only 11% of diabetic patients scored good compared to 67% who scored poor. This was in line with Santa Eulalia, Malekmakan, Lee HK, Rawah T Eshky and Faisal who showed in their studies that patients suffering from systemic diseases like multiple sclerosis, diabetes, renal failure, cardiac problems and down syndrome had poor oral hygiene.[8-12] Similarly social disparity also played a role in oral health related quality of life.[13]

44% of the patients brushing their teeth had good oral health score as compared to 78% of the patients not brushing their teeth who scored poor. 50% of patients who occasionally brushed complained of bleeding gums while 100% of patients who brushed after every meal did not have this complain. 60% of the patients who brushed twice daily also did not complained of bleeding gums. This proves a direct correlation of oral hygiene practice with oral health.[14]

Only 30% of smokers scored good while 50% of patients chewing beetle nut scored poor and 67% of people taking sniff (naswar) scored poor. 56% of patients with none of these habits scored good.

Regarding a previous visit to the hospital for dental care, 38% of the patients who had a history of previous hospital visit for dental care scored good on oral health score as compared to 46% who scored good but never had a previous visit to hospital thus indicating good oral hygiene practices at home.

Fig II explains relationship of gingival bleeding with frequency of brushing.44% of the patients who brush once a day complaint of gingival bleeding where as, 55% did not complain of gingival bleeding.11% of the patients complained of gingival bleeding who brushed twice a day and 83% did not complain of gingival bleeding.100% of the patients showed no bleeding gums who used to brush after every meal. 72% of patients who occasionally brushed complaint of bleeding gums and 28% did not complain of bleeding gums. P value of 0.00 showed significant relationship between frequencies of brushing and gingival bleeding. This shows the importance of brushing with reference to spread of gingival and periodontal diseases.

It was also observed that patients whose age was near mean value scored good and fair on oral health scale and with progression of age the score of the patients moved towards the poor side on oral health scale. It was inline with national oral health survey.[1] Djurickovic M. evaluated oral health in children and concluded that oral health conditions in children at the age of 12 does not satisfy.[15] Gluhak C. investigated the oral state in participants cared for in residences for senior citizens in Syria, Austria concluded that with increasing age patients are more prone to periodontal problems.[16]

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