

ORIGINAL ARTICLE

PATTERN OF DENTAL DISEASES AMONG PATIENTS ATTENDING OUTPATIENT DEPARTMENT OF DENTAL: A HOSPITAL BASED CROSS-SECTIONAL STUDY**P.D Garkoti¹, C.M.S. Rawat², Rajesh Kumar Singh³, Vinita Rawat⁴, Janki Bartwal⁵, Neha Goyal⁵****Author's Affiliations:** ¹Associate Professor, Dept of Dentistry; ²Professor, ³Assistant Professor, Dept of Community Medicine; ⁴Associate Professor, Dept of Microbiology; ⁵Resident, Dept of Community Medicine, GMC Haldwani, Govt Medical College, Haldwani, Nainital**Correspondence:** Dr P.D Garkoti, Email: drpdgarkoti@rediffmail.com**ABSTRACT**

Introduction: The public health problems associated with oral disease are a serious burden in India and other countries of the world. The causes of oral diseases are primarily rooted in poor socioeconomic and physical environment; unhealthy lifestyles and oral health related behaviour accordingly the action towards improvement of oral health should be directed towards modification of unhealthy environment and behaviours.

Objective: To know the pattern of dental diseases among the patients attending Dental OPD.

Materials and Methods: A hospital based cross sectional study among patients attending dental OPD in a tertiary care centre of Kumaun region during a period of one year i.e. from 1st January 2012 to 31st December 2012.

Results: A total of 8928 patients attended dental OPD. Majority of the patients (25.3%) were in the age group 30-39 years. Mostly were males (51.54%). Most common disease was dental caries (54.54%), followed by gingivitis (37.62%), abrasion (3.82%), malocclusion (3.05%), pericoronitis (0.53%) and jaw fracture (0.44%).

Conclusion: Dental Caries was the most common disease. Majority of the patients were in 30-39 years of age group. Health education and awareness at school level and in the community might prevent tooth loss in later life.

Keywords: Dental diseases, Cross-sectional study, Tertiary care hospital

INTRODUCTION

Worldwide, 60–90% of school children and nearly 100% of adults have dental cavities, often leading to pain and discomfort. Severe periodontal (gum) disease, which may result in tooth loss, is found in 15–20% of middle-aged (35-44 years) adults. Globally, about 30% of people aged 65–74 have no natural teeth. ¹

Oral diseases such as dental caries, periodontal diseases, tooth loss and oral cancer have emerged as a major public health problem in the Member countries of the South-East Asia (SEA) Region of WHO. In view of the prevalence of risk factors and inadequate access to and affordability of preventive and curative oral health services oral diseases have a growing impact on the health and

wellbeing of people in the region and in particular on vulnerable and marginalized groups of population. ²

India exposes disparities in oral health, with lower income groups having higher disease rates, limited or no access to care. Dentist: Population ratio in the rural areas is dismally low with less than 2% dentists being available for 72% of rural population. Statistics present the grim reality, that 95% of the population in India suffers from gum disease, only 50% use a toothbrush and just 2% of the population visit the dentist. This sounded an alarm and the need for a blueprint, one that would be a tool for sustained effort. National Oral Health Programme was therefore initiated to accurately assess needs, monitors outcomes, decreases dis-

parities, improves access to care and ultimately improves oral health.³

Risk factors for oral diseases include an unhealthy diet, tobacco use and harmful alcohol use. These are also risk factors for the four leading chronic diseases – cardiovascular diseases, cancer, chronic respiratory diseases and diabetes – and oral diseases are often linked to chronic disease. Poor oral hygiene is also a risk factor for oral disease.¹

This study was undertaken with the objective of knowing the dental disease pattern among patients attending outpatient department (OPD) of dental in a tertiary care centre of Kumaon region.

METHODOLOGY

This was a hospital based cross sectional study conducted in dental OPD of Susheela Tiwari Governmental Hospital, Haldwani. All the patients attending dental OPD was included in this study. The entire study was completed within a year from 1st January 2012 to 31st December 2012.

The data was collected from the OPD register and entered in Microsoft Excel for analysis.

Ethical approval for the study was taken from the institutional ethical committee.

RESULTS

A total of 8928 patients attended the dental OPD during the one year period. Four thousand six

hundred two (51.54%) were male. Majority (25.3%) of patients were in the age group of 30-39 years.

Table 1 shows the pattern of disease seen among the patients attending the dental OPD. It can be seen that patients were suffering more commonly with dental caries (54.54%), followed by gingivitis (37.62%), abrasion (3.82%), malocclusion (3.05%), pericoronitis (0.53%) and jaw fracture (0.44%).

Distribution of dental diseases according to sex shows that more number of male patient were suffering from dental caries (50.09%), gingivitis (54.03%), jaw fracture (71.79%), malocclusion (56.78%) and pericoronitis (57.45%) in comparison to that of females. The problem of abrasion (59.53%) was more commonly observed in females.

Table 2 shows the disease pattern among different age groups attending dental OPD. Mostly (25.3%) the patients belonged to 30-39 years of age group, followed by 40-49 years (21.63%), 20-29 years (18.18%), 50-59 years (15.86%), and 10-19 years (11.63%) while minimum (7.4%) number of patients belongs to ≥ 60 years of age. Dental Caries (23.7%), gingivitis (29.71%) and jaw fracture (35.9%) were seen most commonly among 30-39 years age group. Abrasion was seen mostly (37.24%) in patients of ≥ 60 years of age. Malocclusion (38.46%) in 10-19 years and pericoronitis (36.71%) in 40-49 years were more commonly observed.

Table 1: Pattern of dental diseases and their distribution according to sex

Variable	Male (%)	Female (%)	Total (%)
Dental Caries	2439 (50.09)	2430 (49.91)	4869 (54.54)
Gingivitis	1815 (54.03)	1544 (45.97)	3359 (37.62)
Abrasion	138 (40.47)	203 (59.53)	341 (3.83)
Jaw fracture	28 (71.79)	11 (28.21)	39 (0.44)
Malocclusion	155 (56.78)	118 (43.22)	273 (3.05)
Pericoronitis	27 (57.45)	20 (42.55)	47 (0.53)
Total	4602 (51.54)	4326 (48.46)	8928 (100.00)

Table 2: Pattern of dental disease according to age groups

Dental diseases	Age Group (Years)						Total
	10-19 (%)	20-29 (%)	30-39 (%)	40-49 (%)	50-59 (%)	≥60 (%)	
Dental Caries	627 (12.88)	1052 (21.61)	1154 (23.7)	923 (18.96)	770 (15.81)	343 (7.04)	4869
Gingivitis	301 (8.96)	459 (13.66)	998 (29.71)	891 (26.53)	521 (15.51)	189 (5.63)	3359
Abrasion	4 (1.17)	15 (4.4)	36 (10.56)	65 (19.06)	94 (27.57)	127 (37.24)	341
Jaw fracture	1 (2.56)	6 (15.38)	14 (35.9)	9 (23.08)	7 (17.95)	2 (5.13)	39
Malocclusion	105 (38.46)	82 (30.04)	46 (16.85)	26 (9.52)	14 (5.13)	0 (0)	273
Pericoronitis	0 (0)	9 (19.15)	11 (23.4)	17 (36.17)	10 (21.28)	0 (0)	47
Total	1038 (11.63)	1623 (18.18)	2259(25.30)	1931 (21.63)	1416 (15.86)	661 (7.4)	8928

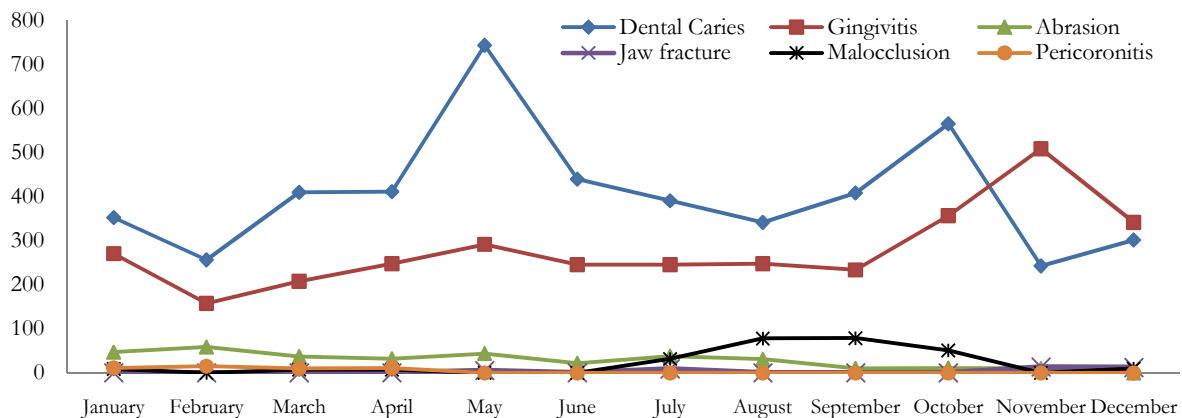


Fig. 1 Month wise distribution of pattern of dental disease

Figure 1 shows the distribution of different dental problems as were seen in different months of the year. It was observed that maximum number (1085) of patients came into OPD during the month of May while OPD was minimum (489) in the month of February.

DISCUSSION

In this present study, the prevalence of dental caries was found to be maximum i.e. 54.54%, followed by gingivitis (37.62%). Abrasion was found in 3.82% of patients while malocclusion, pericoronitis and jaw fracture was seen in 3.05%, 0.53% and 0.44% of patients respectively.

In a prospective study of dental disease pattern done by Hassan S et al ⁴ in Srinagar hospital, found that dental caries (60.3%) was most common followed by periodontitis (18.3%) and gingivitis (11.3%). The retained deciduous comprised of 3.3% and other diseases which include fractured tooth and orthodontic problems comprised of another 6.3%.

In a hospital based study in Kolkata Dasgupta U et al ⁵ observed that 68.9% of the patients had dental caries, 50.8% had gingivitis and 32.2% had abrasion of teeth.

In a study done among students of primary school of 12 years age in Zimbabwe by Mafuvadze BT et al ⁶ high prevalence of dental caries in both urban (59.5%) and rural (40.8%) children was observed.

In a community based study by Ayele FA et al ⁷ in Ethiopia among children of 7-14 years of age group the prevalence of dental caries was found to be 36.3%.

In present study, mostly (25.3%) the patients belonged to 30-39 years of age group, followed by 40-49 years (21.63%), 20-29 years (18.18%), 50-59 years (15.86%), 10-19 years (11.63%) while mini-

mum (7.4%) number of patients belongs to ≥ 60 years of age. 51.54% of the patients were males while 48.46% were females.

Dasgupta U et al ⁵ observed that maximum number of study subjects presenting with dental problems were in the age group of 30-39 and 40-49 years (24.6% and 20.2% respectively). 14.5%, 18.3%, 13.7% and 8.7% patients were in the age group of 10-19, 20-29, 50-59 and ≥ 60 years respectively. 56.3% study subjects were females and rest (43.7%) were males.

In present study, dental caries (23.7%), gingivitis (29.71%) and jaw fracture (35.9%) was most commonly seen among 30-39 years of age group. Abrasion (37.24%) was most common among patient of 60 years and above. Malocclusion (38.46%) was mostly seen in 10-19 years while pericoronitis (36.17%) was most frequently observed in patients of 40-49 years of age.

Dasgupta U et al ⁵ in their study found that percentage of patients suffering from dental caries was around 73 to 75% in the age group of 10 to 39 years, it was around 56 to 58% in patients aged 50 years and above. 66.2% of dental caries patients were in the age group of 40-49 years. The difference of frequency of dental caries in different age groups were not significant ($p > 0.05$). Frequency of gingivitis varied from 43% to 50% in different age groups except in the age group of 30-39 years where the frequency was 61.1%. The differences were not statistically significant. It was found that percentage of patients suffering from teeth abrasion increased with increase in age, lowest (7.5%) in the age group of 10-19 years and highest ≥ 60 years (65.6%), in other age groups frequency varied from 25% to 48%. The difference of frequency in different age groups was statistically significant ($p < 0.05$).

CONCLUSION

Dental caries was the most commonly seen dental disease among the patient attending Dental OPD, followed by gingivitis. Mostly the patients were of 30-39 years. Inculcating the oral hygiene early in life through health education in school and at community level may prevent tooth loss and other problems related to dental in later years of life.

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