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Assessment of dental pain in population catering urban health training centre of Shyam Shah Medical College, Rewa (MP)

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***Abstract*---**Self medication was leading cause of failure to improve dental status of study population. Dental treatment was unmet due to this reason. Dental caries progressing to pain and difficulty in chewing food and overall deterioration in quality of life among the participants may be attributed to lack of awareness and practices regarding use of dental floss and mouthwash. Focus should be laid on formulating and implementing oral health promotion programs that aim to provide accessible and economic oral health services in rural and urban areas. This will motivate the patients with oral diseases to get treatment done by dental specialists rather than opting for self medication.

***Keywords*---**assessment dental pain, population, urban health.

Introduction

Diseases of oral cavity are a global public health problem which impose serious health and economic burdens and impair the quality of life of the affected population. Almost 3.9 billion people have oral diseases worldwide. The most common morbidity due to oral health disease is seen due to untreated dental

caries in permanent teeth.[1] There are various factors which influence the oral health in rural and urban areas including urbanization, economic development and education level.[2,3] Dental caries is the most evident cause of pain & discomfort which globally affects children & adults. [4]

In India, due to rural livelihood of people mostly (68%), there is less information and data about dental hygiene. [5] The prevalence of oral diseases is more commonly seen in socially marginalized groups. [6] Development of community health programs for good oral health depended on the data as determining prevalent knowledge about oral health. [7] The WHO STEP wise approach also recommends data collection on modifiable risk factors (oral hygiene practices, alcohol and tobacco consumption, and utilization of dental services) to determine major possible disease burden. [8] This study was done to assess the dental pain, its effect on their daily life style and the practices adopted to prevent pain in the population residing in the catering area of urban health training centre.

Materials & Methods

The cross sectional study was conducted from January 2021 to January 2022 among population residing in catering area of urban health training centre Bodabagh of Shyam Shah Medical College, Rewa (MP). The nature of study was explained to all the patients reporting to UHTC Bodabagh.

Inclusion criteria:

- Those providing informed consent for the participation in study were included.

Exclusion Criteria:

- Population who were not willing to provide informed consent and those requiring immediate medical aid.

Dental examination was performed according to the World Health Organization (WHO) dental caries diagnosis guideline. After that, the numbers of decayed teeth, teeth missing due to caries, and filed teeth for primary teeth (dmft) and permanent teeth (DMFT) were obtained using a dental chart. A total of 200 participants were diagnosed with dental caries. A structured self-administered, closed ended questionnaire was utilized to obtain information from the study participants. Socio-demographic characteristics as gender, age, residence were collected. Statistical analysis was done using the software Statistical Package for Social Sciences, version 24 (SPSS, Inc., Chicago, Illinois, USA). For each participant, dental caries was expressed in primary teeth as dmft > 0 and in permanent teeth as DMFT> 0. Descriptive statistics was used to calculate the mean and standard deviation of quantitative variables. Frequencies (numbers and proportions) were implemented to assess prevalence of dental caries among groups. Contingency tables with the chi-square (x2) test or equivalently proportion test were used for bivariate analyses of dependent variable and independent categorical variables.

Results

A total of 200 subjects who were having dental caries and gave consent for participation were included in the study. The study population consisted of 115(57.5%) females and 85(42.5%) males and the mean age was 31 years. History of dental pain of in one year duration was reported by 122 participants. The prevalence of dental pain in patients with caries was found to be 61%. Brushing and toothpaste usage was seen in 94% (n=188) cases while dental floss usage was seen in 35% (n=70) cases. Mouthwash usage was seen in 48.5 %(n=97) cases with cavities. Tobacco consumption was reported by 48 % participants. Smokeless form of tobacco was commonly used rather than smoking tobacco.14% of them presented with history of consumption of alcohol.

Frequency of pain was intermediate in most of the cases (36.8%) while severe in 33.6% cases. Triggering factor of pain was sensitivity to cold in 20.5% cases while sensitivity to heat in 14.8% cases. Spontaneous triggering factor of pain was seen in 17.2% cases. Analgesics were used as remedy in 87.70% cases while antibiotics were used by 62.29% cases. 54.92% cases used self prescription for relieving pain. As treatment restoration of teeth followed by root canal treatment was done in majority of cases and extraction of teeth was done in only in 23.36% cases.

Table 1- Distribution of study population according to History of pain (dental) and oral hygiene practices during past 1 year

History of dental pain in past 1 year			
Gender	Yes	No	P value
Male	41	44	0.0014
Female	81	34	
Total	122	78	
Brushing and toothpaste usage	Yes	No	P value
Yes	113	75	0.305
No	9	3	
Total	122	78	
Dental floss usage	Yes	No	P value
Yes	22	48	<0.001
No	100	30	
Total	122	78	
Mouthwash usage	Yes	No	P value
Yes	58	39	0.734
No	64	39	
Total	122	78	

Table 2 - Distribution according of history of addiction

History of addiction	Number (n=200)	Percent
Tobacco consumption	96	48%
Alcohol consumption	28	14%

Table 3- Distribution of study population according to age

History of dental pain in past 1 month			
Age	Yes	No	P value
25 to 30 years	54	21	0.008
31 to 35 years	27	32	
More than 30 years	41	25	
Total	122	78	

Table 4- Distribution of study population according to frequency of pain related variables

Intensity of pain	Number(n)	Percentage (%)
Weak	23	18.80%
Intermediate	45	36.80%
Severe	41	33.60%
Very Severe	13	10.80%
Total	122	100%
Triggering factor of pain	Number(n)	Percentage (%)
Sensitivity to cold	25	20.50%
Sensitivity to heat	18	14.80%
Sensitivity to sweet	11	9.00%
Sensitivity to chewing	47	38.50%
Spontaneous	21	17.20%
Total	122	100%

Table 4- Distribution of patients according to the type of drug, remedies and treatment received by a dental surgeon to cure pain

Drug (N=122)	Number(n)	Percentage (%)
Analgesics	107	87.70%
Antibiotics	76	62.29%
Localized drugs	21	17.21%
Remedies (N=122)	Number(n)	Percentage (%)
Self prescription	67	54.92%
Seen a dentist	55	45.08%
Treatment performed on patients who visited a dentist (N=55)	Number(n)	Percentage (%)
Extraction of teeth	13	23.36%
Restoration of teeth	36	65.45%
Root Canal Treatment	26	47.27%
Took only medicines	12	21.82%

Discussion

The present study provides estimated prevalence of dental pain in population with dental caries residing in catering area of UHTC, SSMC Rewa. Oral hygiene practices were also observed in these cases with effective methods to combat pain. Some of the participants in this study had history of alcohol addiction while some

were addict to smoking. Similar study was conducted in Bihar which also revealed that lower proportion of alcohol intake was present in study population [9]

Tobacco consumption was commonly seen in study population which may be leading cause of dental problems faced by the community. In the present study, tobacco consumption was seen in 48% cases with majority consuming smokeless tobacco, which was higher in comparison to some studies of India with similar study settings [9-11] and much higher than the Indian Global Adult Tobacco Survey 2 [GATS 2, 2016 – 17] which reported a prevalence rate of 28.6 percent across India and 48.2 percent for the Indian state of Assam respectively. [12] Consumption of tobacco and particularly smokeless tobacco was higher among females. An analysis of secondary data from National Family Health Survey in 2005 – 06 reported about 10.7 percent of women consuming chewable tobacco in India. [13] In addition, GATS 2 reported about 12.8 percent of females above 15 years of age consuming smokeless tobacco in rural India. [12] It is estimated that female tobacco users from Bangladesh, Myanmar, India and Thailand are more likely to use smokeless tobacco than smoking form. [14] The reason may be due to absence of male at the time of survey (day time) due to their jobs and females were present to fill the questionnaire. In addition, prevailing consumption of tobacco among females is also reported in literature [15 – 18]

Further research is required to assess the cause of caries that may be factors like diet and sugar consumption which was not included in this study. Practice of cleaning teeth by fingers and not by toothbrush imparts increased prevalence of caries with pain. Good practice of tooth cleaning with a brush and toothpaste /toothpowder was reported by majority of the participants. The findings in our study were better than the study conducted among rural adults in Central India, where about 37 percent and 40 percent did not use toothbrush as against 6 percent in the present study. [9, 19] Use of dental floss and mouth wash prevents the infection, caries and pain. Use of dental floss and mouth wash were reported in 35% and 48.5% Cases. The 61 % of participants gave history of dental pain in the past 1 year with females experiencing more dental pain than males. 42.62% cases had self medication while remaining were aware to go to dentist for proper treatment (45.08%). Dental pain has its influence on routine life, it limits day to day activities. Inability to take food was resultant of dental pain in both males and females. Participants of age group 25 to 30 years had difficulty to chew food and to impart their work in good manner. The results were almost similar to a study conducted among Brazilian adults where difficulty in chewing certain food was the most common impact. [20] Similar results were obtained in various previous studies. [21]

In current study, no factor was seen significantly in use among the study participants for cure and prevention of this dental pain. Approach to dentist for proper cure was also not significantly prevalent among cases with only 45.08% population consulting a dental surgeon for treatment. Self medication was more prevalent among them.

Conclusion

Self medication was leading cause of failure to improve dental status of study population. Dental treatment was unmet due to this reason. Dental caries progressing to pain and difficulty in chewing food and overall deterioration in quality of life among the participants may be attributed to lack of awareness and practices regarding use of dental floss and mouthwash. Focus should be laid on formulating and implementing oral health promotion programs that aim to provide accessible and economic oral health services in rural and urban areas. This will motivate the patients with oral diseases to get treatment done by dental specialists rather than opting for self medication.

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