



A CROSS-SECTIONAL STUDY ON THE PATTERN OF TOBACCO USE AND ORAL LESIONS IN A DENTAL OPD OF A TERTIARY CARE HOSPITAL, ANDHRA PRADESH, 2023

Dentistry

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ABSTRACT

Background: Tobacco use is one of the largest health problems globally and is a preventable cause. Over eight million die prematurely due to tobacco use. Early identification and treatment of premalignant and neoplastic lesions can be done by simple screening in dental outpatient departments of hospitals

Objectives:

1. To study the pattern of tobacco usage among the patients attending the Dental OPD of a medical college in Nellore District, AP
2. To enlist the oral manifestations among tobacco users

Methods: We conducted a cross-sectional study in the dental OPD of a tertiary care hospital between July and December 2023. We collected data on the pattern of tobacco usage and intention to quit. Oral manifestations were collected from 150 tobacco users attending the OPD after obtaining informed oral consent and Institutional ethical clearance. Data was entered and analysed using Microsoft Excel. Results are presented in frequencies and proportions. **Results:** Prevalence of tobacco use was 12.5% with a mean age of 43.4 ± 13.3 years. The mean age of tobacco initiation was 21.8 ± 7.6 years. The proportion of them smoking and using smokeless tobacco was 72 (48%) and 64 (42.7%) respectively. Of the total users, 48 (32%) had oral lesions of tobacco use, smokers' palate was identified among 16 (33.3%) while pre-cancerous lesion leukoplakia among 10 (20.9%). **Conclusion:** One-third of the tobacco users who had developed oral manifestations due to tobacco use, serve as a potential for screening the oral cavity for early precancerous and neoplastic lesions thereby enabling early recognition and tobacco prevention

KEYWORDS

Tobacco use, oral lesions, tobacco cessation

INTRODUCTION

Eight million deaths every year are attributed to tobacco use as smoking or smokeless forms.¹ It is a major public health threat with two-thirds of mortality due to non-communicable diseases, and tobacco consumption is a proven preventable risk factor.² According to the Global Adult Tobacco Survey (GATS)-2 (2016–17), 28.6% of the population aged above 15 used tobacco in any form, accounting for every 5th adult using smokeless tobacco and every 10th adult smoking tobacco.³

It is an important risk factor for oral mucosal lesions, including precancerous and cancerous. Smoking and chewing tobacco act synergistically with a higher risk of oral carcinogenesis in persons with mixed habits.⁴ Globally, India has the highest oral cancer burden attributing to one-third of total cancers. In India, oral cancers contribute to over 30% of all cancers⁵

Oral cancers satisfy the criteria of diseases for screening, thus enabling early detection of premalignant and early neoplastic changes in the oral cavity. Simple visual examinations in the dental OPD can identify these lesions, supplemented with health education encouraging the person to help quit tobacco use. This is one of the best ways of promoting health and improving survival and quality of life for persons with oral cancers. Therefore, we intended to understand the prevalence and pattern of tobacco use in our outpatient department (OPD).

Objectives

1. To study the pattern of tobacco usage among the patients attending the Dental OPD of a medical college in Nellore District, AP
2. To enlist the oral manifestations among tobacco users

Methodology

We conducted a cross-sectional study by doing a medical record review in the outpatient dental department of a tertiary care hospital in the Nellore district of Andhra Pradesh between April and September 2023. Tobacco use-related information was collected as part of the routine cessation and counseling was extracted for the study. All cases aged more than 15 years attending the OPD with any dental complaints and used tobacco in any form, either smokeless or smoking were included. Patients who had consumed any form of tobacco in the past month were included in the study. Using a pretested semi-structured questionnaire, we obtained data from 150 people, and information on basic demographic details, tobacco use, and its type. We obtained informed oral consent and institutional ethical permission.

We entered the data in Microsoft Excel 2019 and analyzed using Epi Info 7.2.6.0. We expressed the results in frequencies and proportions. The chi-square test was used wherever appropriate to test the association between two variables.

RESULTS

Of the total 1200 patients seen in the dental OPD, 150 were consuming some form of tobacco, and the period prevalence of tobacco use was 12.5%. The mean age of the study subjects was 43.4 ± 13.3 years, 112 (74.5%) of them were males. Education to primary level was attained by 55 (36.7%) of them and 57(38%) of them worked as unskilled workers, 59 (39%) of them belonged to SES class IV. (table 1)

The mean age at which people start using tobacco is 21.8 ± 7.6 years. Smoking tobacco was found among 72 (48%), and cigarettes were smoked by 43 (75%) of the patients. Smokeless tobacco was used by 64 (42.7%), of which chewable tobacco was used by 36 (46.7%). (Table 2)

Leisure and peer influence were the reasons for initiating using tobacco for 57 (38%) and 52 (34.7%) patients. It was used as a remedy for illnesses like colds, toothache, and headaches by 6 (4%). Awareness about the ill effects of tobacco use and the pictorial warnings on tobacco products was present among 113 (75.3%) and 94 (62.7%). Intention to quit tobacco use was admitted by 72(48%) due to the ill effects of tobacco (53, 74%). Tobacco dependence was a barrier to their intention to quit for 65 (90%) of the users. (Table 2)

Tobacco users spent around Rs 810 ± 210 INR on tobacco per month on average, 22 (14.6%) of them borrowed money to buy tobacco products.

Types of oral lesions due to tobacco use are described in Table 3, we found oral manifestations of tobacco use in 48 (32%) of the users of which smokers' palate was found among 16 (33.3%), followed by tobacco pouch keratosis among 11 (22.9%) users. Pre-cancerous lesion leukoplakia was identified among 10 (20.9%).

DISCUSSION

Tobacco use among the cases attending dental OPDs with oral complaints was 12.5% in a clinic-based cross-sectional study. Smoking was more common than chewable forms of tobacco, though the difference was marginal. Oral manifestations of tobacco use were found among one-third of the subjects with smokers' palate being the commonest.

According to the Global Adult Tobacco Survey 2 (GATS 2), the prevalence of current tobacco use in studies done in Andhra Pradesh and Maharashtra was found to be 20%.^{6,7} which was higher than our study. The mean age of cases was similar to that of other studies.⁷

We found smoking to be more common than chewing, similar to findings in GATS 2 survey.^{6,8} The habit of using tobacco, commonly initiated as a leisure activity has progressed into addiction causing tobacco dependence. Interestingly, it was used as a remedial measure for health ailments like headache, toothache, etc.,. Despite being aware of the ill effects of tobacco use on health, they continued its use due to addiction and dependence.⁹ Similar to ours, the intention to quit tobacco use was expressed due to financial and familial reasons in several other studies.^{10,11,12} We did not see the impact of pictorial warnings on either initiating the use of tobacco products or intention to quit tobacco positively as also reported in a qualitative study.^{13,14} The effectiveness of pictorial warnings in preventing tobacco use cannot be sidelined, as it depends on the way people perceive it, the intention and attempt to quit was higher among those who have perceived the picture messages on the harm that tobacco can cause.¹⁵

Oral manifestations of tobacco use were observed in varied degrees in over one-third of the cases. Similar observations were also identified in a study¹⁶. We identified a higher proportion of cases with oral lesions compared to few studies,¹⁷ which can be attributed to the pattern of its use which includes the type of tobacco, duration, and frequency of its use, and also the way it is used as there can be subjective differences, data on which was not captured by us and we acknowledge it as a limitation.

A significant downward trend in the prevalence of tobacco use in India, and Andhra Pradesh in the past few decades attributed to the preventive initiatives taken globally and nationally has been observed. The efforts to control its use through health promotion and prevention activities should continue with great vigor. Research in oral health and hygiene helps us understand many pre-cancerous malignancies and aid in health promotion.

CONCLUSION

Tobacco use initiated as a leisure activity had led to its dependence with unsuccessful attempts of quitting, despite being aware of the ill effects. Oral manifestations of tobacco use serve as a clear sign of developing serious illness in the future. The potential of dental OPDs in identifying these signs early and preventing tobacco use, encouraging quitting needs to be emphasized and promoted.

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Table 1: Characteristics of the Study Population

Variable	Frequency (n)	Percentage (%)
Gender		
Male	112	74.5
Female	38	25.3
Education		
Illiterate	48	32
Primary	55	36.7
Higher primary	29	19.3
Pre-University	10	6.7
Graduate	8	5.3
Occupation		
Unemployed	9	6.0
Unskilled worker	57	38.0
Semiskilled worker	34	22.7
Skilled worker	46	30.7
Professionals	4	2.7
Type of Family		
Nuclear	114	76
Joint	36	24

Table 2: Pattern of Tobacco Usage Among the Study Subjects

Variable	Frequency (n)	Percentage (%)
Type of tobacco used		
Smoking	72	48.0
Smokeless	64	42.7
Both	14	9.3

Smoking (n=86)		
Beedi	34	59
Cigarette	43	75
Beedi & Cigarette	9	16
Smokeless (n=78)		
Only tobacco chewing	36	46.7
Beetle leaf with tobacco and arecanut	36	46.7
Tobacco with lime	1	1.3
Tobacco as sniff (Nasi)	4	5.3
Reason for initiation		
Leisure	57	38.0
Peers influence	52	34.7
Influence of a family member	4	2.7
Stress	23	15.3
Relationship issues	3	2.0
Death of a loved one	5	3.3
As a remedy for illness	6	4.0
Aware of the health effects of tobacco		
Yes	113	75.3
No	37	24.7
Awareness about pictorial warnings on tobacco products		
Yes	94	62.7
No	56	37.3
Intention to quit tobacco		
Yes	61	40.7
No	89	59.3
Reason for intention to quit (n=72)		
Ill effects	53	74.0
Concern about family	8	11.3
Cost	3	4.0
Pressure from family to quit	8	10.7
Reason for not being able to quit (n=72)		
Dependence	65	90.0
Stress	4	6.0
Did not try	2	2.7
Friend circle	1	1.3

Table 3: Characteristics of Tobacco-related Oral Lesions (n=48)

Tobacco related lesion	Frequency (n)	Percentage (%)
Tobacco pouch keratosis	11	22.9
Leukoplakia	10	20.9
Smokers' melanosis	6	12.5
Smoker's palate	16	33.3
Oral lichen planus	1	2.1
OSMF	2	4.2
Ulcerative proliferative growth	1	2.1



Figure 1: Leukoplakia



Figure 2: Smoker's Palate

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