



PREVALENCE OF WHITE AND RED LESIONS IN ORAL CAVITY IN WESTERN UTTAR PRADESH.

Oral Pathology

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ABSTRACT

Introduction: Objectives: The purpose of this study was to determine the white lesions in patients who attended the camp held in dj dental college to determine the prevalence and risk factors for oral lesions. Smoking, drinking and chewing tobacco product, common habits in India have been positively associated with oral lesions. White and red lesions in the oral cavity may be benign, pre-malignant or malignant. There are no signs and symptoms which can reliably predict whether these lesions will undergo malignant change or not **Subject and method:** Intraoral soft tissue examination was performed on patients between august 2015 to sep2015 **Result:** Patients from various villages of western utter Pradesh were screened with smoking and/or chewing habits aged 15 years and over were included in the study through random selection. A screening examination including intraoral clinical examination was performed. In the present study, 87.2% of males and 12.8% of females constituted the study population. Out of 943 subjects, 665 i.e. 70.5% subjects were smokers while 278 i.e. 29.5% subjects were non-smokers. In our study, white lesions seen, tobacco pouch keratosis was the most common oral mucosal lesion encountered in the entire study group followed by leukoplakia and smokers palate. Other than smoker's palate and paan -chewer's lesion which exclusively occurred in smokers and chewers respectively, few cases of lichen planus and ulcers are also found. **Conclusion:** White, pigmented lesions were the most common type of oral mucosal lesions found in this study. Although most of these lesions are hapless, the dentist should be able to recognize and differentiate them from the worrisome lesions, and diagnose.

KEYWORDS

Oral cavity, Oral lesion, prevalence

Introduction:

The oral mucosa serve as a protective barrier against trauma, pathogens and carcinogenic agents .It's a reflection of your health. It can be affected by a wide variety of lesions and conditions. From minor changes to major changes all need to be examined .Some lesions are harmless and some having complication. Hence, oral soft tissue examination is crucial and should be done in a systemic manner². White and red lesions in the oral cavity may be benign, pre-malignant or malignant. There are no signs and symptoms which can reliably predict whether these lesions will undergo malignant change or not³. The purpose of this study was to determine the prevalence of oral mucosal lesions in patients attended the camp. This information can help determine the epidemiology and severity of oral lesions in affected area, and help identify risk factors for oral lesions. It will also serve as a baseline for future studies with the goal of finding ways to improve oral health in this country. 1

2. Subject and methods:

A total number of 943 subjects from various villages of western utter Pradesh who were attended the free dental checkup camp from april 2015 to september 2015 with smoking and/or chewing habits aged 15 years and over were included in the study through random selection a screening examination including intraoral clinical examination was performed in the outpatient department, DJcollege of dental sciences & research using artificial light, dental mirror, dental explorer, gauze, and other materials.

Cotton swabs were used to remove debris and to see whether white lesion can be wiped off.

Personal data including age, gender, chief complaint, and social habits were recorded..

Details of the habits such as duration in years, frequency, site of placement of quid in the oral cavity, and alcohol consumption were recorded.

Individuals were divided into smokers (those who smokes as well as chew tobacco in the form of gutkha, paan, supari etc.) Andnon-smokers. Using the color atlas of common oral diseases(langlais et al., 2009) as a guide for diagnosis and grouping, oral mucosal lesions were identified as either white, red, pigmented, ulcerative based on their prominent clinical appearance

The clinical diagnosis of oral mucosal lesions/conditions such as leukoplakia, oral submucous fibrosis, lichen planus, smoker's palate, and other lesions were based on the pertinent who criteria.

3. Results:

The demographic characteristics of the patients in this study are shown in table 1. Of the 943 patients, 822 (87.2%) male and 121 (12.8%) female . There was significant difference in the prevalence of oral lesions between males and females.

Table 1. prevalence of habits according to gender

GENDER	Frequency	Percentage
• Male	• 822	• 87.2
• Female	• 121	• 12.8
• Total	• 943	• 100

As seen from the study findings, the difference in the pattern of habits in the two sexes were found to be statistically significant. According to table -2 there is a strong correlation of oral mucosal lesions between smokers and non-smokers. The study showed an increased consumption of tobacco in men and an increased incidence of oral mucosal changes among smokers with some additional habits (chewing /alcohol) as compared to those with lesions who did not smoke. This was found to be statistically significant i.e. $P < 0.001$. overall leukoplakia was found in 90 (9.5%) of the total population, oral submucous fibrosis in 27 (2.9%), lichen planus in 15 (1.6%), tobacco pouch keratosis in 109 (11.6%), ulcers in 24 (2.5%) and smokers palate in 62 (6.6%) of the total population. tobacco pouch keratosis (was the most common oral mucosal lesion encountered in the entire study group followed by leukoplakia and smokers palate. Other than smoker's palate and paan-chewer's lesion which exclusively occurred in smokers and chewers respectively, few cases of lichen planus and ulcers are also found.

Table 2. prevalence of oral mucosal lesions in study group (with habits)

	Frequency	Percent	Valid Percent
Smoker	665	70.5	70.5
Smokeless	278	29.5	29.5
Total	943	100.0	100.0

According to table -2 there is a strong correlation of oral mucosal lesions between smokers and non-smokerstable

3. Frequency Of Prevalence Of Oral Mucosal Lesions

	No.	Frequency	Mean	Std. Deviation	Std. Error Mean
Leukoplakia	943	90	1.90	.294	.010
OSMF	943	27	1.97	.167	.005
Lichen planus	943	15	1.98	.125	.004
Tobacco pouch keratosis	943	109	1.88	.320	.010
Ulcer	943	24	1.97	.158	.005
Smokers palate	943	62	1.93	.248	.008

Table 3 shows the prevalence of various white and red lesions of the oral cavity. The frequency of leukoplakia was found in 90 (9.5%) of the total population, oral submucous fibrosis in 27 (2.9%), lichen planus in 15 (1.6%), tobacco pouch keratosis in 109 (11.6%), ulcers in 24 (2.5%) and smokers palate in 62 (6.6%) of the total population.

This shows a higher prevalence of tobacco pouch keratosis i.e. 11.6% among all other lesions. We also noted the location of 943 lesion and condition identified.

DISCUSSION:

In our study, the prevalence of oral mucosal conditions and diseases may be caused by local diseases (bacterial or viral), systemic diseases (metabolic or immunologic), drug-related reactions, or lifestyle factors such as the consumption of tobacco, betel quid, or Alcohol. However, smoking and chewing tobacco is considered to be the most important cause of the oral mucosal lesions. The prevalence of oral white and red lesions also known as precancerous conditions and lesions is particularly very high in rural population of India as compared to urban population. These differences are due to the lack of awareness of the deleterious effect of smoking and tobacco chewing on the general health of a person. Chewing tobacco alone is considered to be one of the major predisposing factors for the occurrence of OSCC. Tobacco can be consumed either as smoking as in Cigarettes, Bidis, Cigars etc. Or can be chewed in the form of Gutkha, Paan, Supari etc. In this study, there is a strong correlation of oral mucosal lesions between smokers and non-smokers. The study showed an increased consumption of tobacco in men and an increased incidence of oral mucosal changes among smokers with some additional habits (chewing/alcohol) as compared to those with lesions who did not smoke. This was found to be statistically significant i.e. $p < 0.001$. In our study, it was noted that the white lesions were more common in males than females which was comparable to the observation of Mathew et al. (2004). Highest number of patients (32%) belonged to 30-50 years age group, this result is not similar to the other studies (Shulman et al., 2004) who have reported that people aged 70 years and older have twice the odds of having the lesion as do those aged from 17-29 years.

5. Conclusion:

In conclusion, our study has provided information about the epidemiologic aspects of oral mucosal lesions that may prove valuable in the planning of future oral health studies in India. Oral white lesions are not uncommon and a significant number of patients are asymptomatic. As some of these lesions are premalignant, it is imperative for the dental and medical professionals to familiarize with their pattern and presentation to effect early diagnosis and management.

Gender distribution :

Gender distribution :					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	1(f)	121	12.8	12.8	12.8
	2(m)	822	87.2	87.2	100.0
	Total	943	100.0	100.0	

Habit:

Habit:					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	1(smok)	665	70.5	70.5	70.5
	2(sml)	278	29.5	29.5	100.0
	Total	943	100.0	100.0	

one statistic:

	No	Mean	Std. Deviation	Std. Error mean
Leuko	943	1.90	.294	.010
Osmf	943	1.97	.167	.005
Lp	943	1.98	.125	.004
Tpk	943	1.88	.320	.010
Ulcer	943	1.97	.158	.005
Sp	943	1.93	.248	.008

Leukoplakia:

Leukoplakia:					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	1	90	9.5	9.5	9.5
	2	853	90.5	90.5	100.0
	Total	943	100.0	100.0	

Osmf:

Osmf:					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	1	27	2.9	2.9	2.9
	2	916	97.1	97.1	100.0
	Total	943	100.0	100.0	

Lichen planus:

Lichen planus:					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	1	15	1.6	1.6	1.6
	2	928	98.4	98.4	100.0
	Total	943	100.0	100.0	

Tobacco pouch keratosis:

Tobacco pouch keratosis:			
Frequency	Percent	Valid percent	Cumulative percent
109	11.6	11.6	11.6
834	88.4	88.4	100.0
943	100.0	100.0	

Ulcer:

Ulcer:					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	1	24	2.5	2.5	2.5
	2	919	97.5	97.5	100.0
	Total	943	100.0	100.0	

Smokers palate

Smokers palate					
		Frequency	Percent	Valid percent	Cumulative percent
Valid	1	62	6.6	6.6	6.6
	2	881	93.4	93.4	100.0
	Total	943	100.0	100.0	

Association with tobacco form

- Leukoplakia more in smoking ($p=0.00$)
- Osmf more in non smokers ($p=0.01$)
- Ulcer more in non smokers ($p=0.02$)
- Smokers palate more in smokers ($p=0.02$)
- Lichen planus more in non smokers ($p=0.00$)

Tobacco pouch keratosis more in non smokers. ($p=0.02$)

Association with gender

- Leukoplakia more in males ($p=0.01$)
- Osmf more in males ($p=0.02$)
- Smokers palate more in males ($p=0.00$)
- Lichen planus more in females ($p=0.00$)
- Tobacco pouch keratosis more in males. ($p=0.01$)

Conflict of interest: The authors have no conflict of interest associated with the study and there has been no significant financial support for work that could have influenced its outcome.

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