

Original Article

Prevalence of Oral White Lesions among Known Population: A Clinical Study

Niharika Singh Rathore¹, Manish Kumar², Ashok Galav³, Mansi Chauhan⁴

¹Senior lecturer, Dept. of Oral Medicine Diagnosis and Radiology, Jodhpur dental college, Jodhpur, Rajasthan,

²Reader, Dept. of Oral Pathology and Microbiology, Tatyasaheb Kore Dental College and Research Center, Kolhapur, Maharashtra,

³Reader, Dept. of Oral Medicine Diagnosis and Radiology, Tatyasaheb Kore Dental College and Research Center, Kolhapur, Maharashtra

⁴Consulting Oral Physician, Happy Teeth Dental Clinic, Deesa, Gujarat

ABSTRACT

Background: The oral cavity is vulnerable to a limitless number of environmental insults because of its exposure to the external world. Hence; we planned the present study to assess the prevalence of oral white lesions among known population. **Materials & methods:** A total of 200 patients were included in the present study. Mouth mirror and probe were used for oral examining the patients. All the results were recorded and were analyzed by SPSS software. **Results:** Commonly observed oral white lesions in the present study were Oral submucous fibrosis (OSMF), Oral lichen planus (OLP), Oral leukoplakia (OL) and Oral candidiasis (OC). Prevalence percentage OSMF, OLP, OL and OC was 1, 0.5, 1 and 1.5 percent respectively. Overall prevalence of oral white lesions was 4 percent. **Conclusion:** Oral white lesions do affect significant percentage of population.

Key words: Oral, Prevalence, White.

Received: 12 May 2018

Revised: 14 June 2018

Accepted: 16 June 2018

Correspondence to: Dr. Niharika Singh Rathore, Senior lecturer, Dept. of Oral Medicine Diagnosis and Radiology, Jodhpur dental college, Jodhpur, Rajasthan,

This article may be cited as: Rathore NS, Kumar M, Galav A, Chauhan M. Prevalence of Oral White Lesions among Known Population: A Clinical Study. Int J Res Health Allied Sci 2018; 4(4):79-81.

INTRODUCTION

The oral cavity is vulnerable to a limitless number of environmental insults because of its exposure to the external world. Many systemic conditions appear initially in the oral cavity and prompt diagnosis and management can help in minimizing disease progression and organ destruction. White lesions are frequently found during the examination of the oral cavity.¹⁻³ Although some benign physiologic entities may present as white lesions, systemic conditions, infections, and malignancies may also present as white oral lesions. An appreciation of the many clinical entities that white lesions may represent is necessary if a differential diagnosis of white lesions is to be elucidated.⁴ ⁵There are no signs and symptoms which can reliably predict whether a leukoplakia will undergo malignant change or not. So a thorough history taking, physical

examination and blood investigations should always be succeeded by biopsy of the white lesion to analyze the histopathological status.⁶⁻⁸

Hence; we planned the present study to assess the prevalence of oral white lesions among known population.

MATERIALS & METHODS

The present study was carried out for assessing the prevalence of oral white lesions among known population. A total of 200 patients were included in the present study. Exclusion criteria for present study included:

- Patients with history of any known drug allergy,
- Patients with history of any systemic illness,
- Diabetic patients,
- Hypertensive patients

After meeting the exclusion criteria, a total of 200 patients were included in the present study. Mouth mirror and probe were used for oral examining the patients. All the results were recorded and were analyzed by SPSS software.

RESULTS

A total of 200 patients were assessed in the present study. Mean age of the patients of the present study was 45.6 years. There were 120 males and 80 females in the present study. Commonly observed oral white lesions in the present study were Oral submucous fibrosis (OSMF), Oral lichen planus (OLP), Oral leukoplakia (OL) and Oral candidiasis (OC). Prevalence percentage OSMF, OLP, OL and OC was 1, 0.5, 1 and 1.5 percent respectively. Overall prevalence of oral white lesions was 4 percent.

Table 1: Demographic data

Parameter	Value
Mean age (years)	45.6
Gender	
Male	120
Female	80

Table 2: Prevalence of oral white lesions

Oral white lesions	Number of patients	Percentage
Oral submucous fibrosis (OSMF)	2	1
Oral lichen planus (OLP)	1	0.5
Oral leukoplakia (OL)	2	1
Oral candidiasis (OC)	3	1.5
Total	8	4

DISCUSSION

In the present study, a total of 200 patients were assessed in the present study. Mean age of the patients of the present study was 45.6 years. Simi S et al studied the clinical and histopathological patterns of white lesions in the oral cavity presented at the study setting and to study the factors associated with the histopathological patterns of the lesions. A hospital based cross-sectional study of patients with white lesions in the oral cavity attending the Department of Dermatology and Venereology, Medical College, Thiruvananthapuram was done. After taking a detailed history, microscopic examination of Potassium hydroxide smear and an oral biopsy with histopathological examination was done. Out of the 50 patients in the study, clinically the diagnoses made were Lichen planus (32 patients; 64%), Frictional Keratosis (4;8%), Dysplasia (2;4%), Oral Hairy Leukoplakia (1;2%), Pemphigus Vulgaris (2;4%), Cutaneous Lupus Erythematosus (1;2%), Oral Submucous fibrosis (3;6%) and Oral Candidiasis alone (5;10%). Out of the 45 patients who had undergone

biopsy, 25 (55.6%) had Lichen planus, 9 (20%) had Frictional Keratosis and mild Dysplasia was found in 4 (8.9%) patients. The measure of agreement between the clinical and pathological diagnosis was only 32%.¹⁰

In the present study, there were 120 males and 80 females in the present study. Commonly observed oral white lesions in the present study were Oral submucous fibrosis (OSMF), Oral lichen planus (OLP), Oral leukoplakia (OL) and Oral candidiasis (OC). Abidullah M et al assessed the prevalence of clinically diagnosed oral white, non scrapable lesions. A total of 100 cases of oral white, non scrapable lesions were included in the study. Based on their history and clinical presentation, clinical provisional diagnosis was made. Then biopsy was done and confirmatory histopathological diagnosis was given and both were correlated. In order to correlate clinical and histopathological diagnosis Discrepancy Index (DI) was calculated for all the cases. Based on clinical diagnosis, there were 59 cases (59%) of leukoplakia, 29 cases (29%) of lichen planus and six cases (6%) of lichenoid reaction; whereas, based on histopathological diagnosis, there were 66 cases (66%) of leukoplakia epithelial hyperplasia and hyperkeratosis (leukoplakia) and 30 cases (30%) of lichen planus. Seventy eight clinically diagnosed cases (78%) correlated with the histopathological diagnosis and 22 cases (22%) did not correlate. The total discrepancy index was 22%. A clinician needs to be aware of oral white, non scrapable lesions.¹¹

In the present study, prevalence percentage OSMF, OLP, OL and OC was 1, 0.5, 1 and 1.5 percent respectively. Overall prevalence of oral white lesions was 4 percent. Awan KH et al evaluated the accuracy of autofluorescence against conventional oral examination and surgical biopsy. A total of 126 patients, 70 males and 56 females (mean age 58.5±11.9 years) who presented to the Oral Medicine Clinics at King's and Guy's Hospitals, London with oral white and red patches suspicious of oral potentially malignant disorders (OPMD) were enrolled. Following a complete visual and autofluorescence examination, all underwent an incisional biopsy for histopathological assessment. Seventy patients had oral leukoplakia/erythroplakia, 32 had oral lichen planus, 9 chronic hyperplastic candidiasis and rest frictional keratosis (13) or oral submucous fibrosis (2). Of 126 lesions, 105 (83%) showed loss of fluorescence. Following biopsy 44 had oral epithelial dysplasia (29 mild, 8 moderate and 7 severe). The sensitivity (se) and specificity (sp) of autofluorescence for the detection of a dysplastic lesion was 84.1% and 15.3% respectively. While VELscope was useful in confirming the presence of oral leukoplakia and erythroplakia and other oral mucosal disorders, the device was unable to discriminate high-risk from low-risk lesions.¹²

CONCLUSION

Under the light of above obtained data, the authors conclude that oral white lesions do affect significant percentage of population. Therefore, adequate screening of these lesions is necessary.

REFERENCES

1. Payne TF. Why are white lesions white? Oral Surg. 1975;40:652–6.
2. Axell T, Holmstrup P, Kramer IR, Pindborg JJ, Shear M. International seminar on oral leukoplakia and associated lesions related to tobacco habits. Community Dent Oral Epidemiol. 1984;12:145–54.
3. Cooke BD. Leukoplakia buccalis: An enigma. Proc R Soc Med. 1975;68:337–41.
4. Mashberg A, Garfinkel A. Early diagnosis of oral cancer: The erythroplastic lesion in high risk sites. CA Cancer J Clin. 1978;28:297–303.
5. Messadi DV, Waibel JS, Mirowski GW. White lesions of oral cavity. DermatolClin. 2003;21:63–78.
6. Warnakulasuriya S, Johnson NW, van der Waal I. Nomenclature and classification of potentially malignant disorders of the oral mucosa. J Oral Pathol Med. 2007;10:575–8.
7. Williams PM, Poh CF, Hovan AJ, Ng S, Rosin MP. Evaluation of a suspicious oral mucosal lesion. J Can Dent Assoc. 2008;74:275–80.
8. Laronde DM, Hislop TG, Elwood JM, Rosin MP. Oral cancer: Just the facts. J Can Dent Assoc. 2008;74:269–72.
9. Cawson RA. Leukoplakia and oral cancer. Proc R Soc Med. 1969;62:610–4.
10. Simi S, Nandakumar G, Anish T. White Lesions in the Oral Cavity: A Clinicopathological Study from a Tertiary Care Dermatology Centre in Kerala, India. Indian Journal of Dermatology. 2013;58(4):269-274. doi:10.4103/0019-5154.113933.
11. Abidullah M1, Raghunath V2, Karpe T3, Akifuddin S4, Imran S5, Dhurjati VN6, Aleem MA7, Khatoon F8. Clinicopathologic Correlation of White, Non scrapable Oral Mucosal Surface Lesions: A Study of 100 Cases. J ClinDiagn Res. 2016 Feb;10(2):ZC38-41. doi: 10.7860/JCDR/2016/16950.7226. Epub 2016 Feb 1.
12. Awan KH1, Morgan PR, Warnakulasuriya S. Evaluation of an autofluorescence based imaging system (VELscope™) in the detection of oral potentially malignant disorders and benign keratoses. Oral Oncol. 2011 Apr;47(4):274-7. doi: 10.1016/j.oraloncology.2011.02.001.

Source of support: Nil

Conflict of interest: None declared

This work is licensed under CC BY: *Creative Commons Attribution 3.0 License*.