

Oral lichen planus in Sri Lankan patients

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Summary

A clinicopathological study of premalignant lesions of the mouth was done in the Department of Pathology from 1990 to 1995. There were 60 patients diagnosed as oral lichen planus in this study. The patients came from all provinces of Sri Lanka, but 40% were from the western province. The majority (82%) clinically presented as white patches or white linear striations. 8% had red and white patches. Another 6% had erosive lesions. 4% had pigmented patches. 85% of the lesions occurred in the buccal mucosa and another 7% occurred in the tongue. Other 8% occurred in areas such as palate, gingival mucosa, lip and palate.

Introduction

Oral lichen planus is a chronic mucocutaneous disease in which the mucosal and skin manifestations can occur independently, concurrently or sequentially. It is a disease that presents with hyperkeratosis with little or no parakeratosis, and the distinctive pathology is at the dermal-epidermal interphase. The oral mucosa is more frequently involved than other mucosal surfaces. The etiology of classic lichen planus is unknown even though the disease is occasionally familial. At times the disease accompanies a variety of disease thought to be autoimmune, such as systemic lupus erythematosus, thymoma, myasthenia gravis and ulcerative colitis. Lichen planus-like lesions are also commonly observed in graft-versus-host disease. These varied observations suggest that complex immunological mechanisms are responsible for lichen planus. In the old literature bacterial, viral and neurogenic origins and more recently, an association with hypertension, diabetes and immunological disorders have been mentioned¹. Although some investigators found slight female preponderance² overall the disease occurs earlier among men³. Lesions occur in various clinical forms such as white patches, erosive

lesions and atrophic patches. An overwhelming majority of the lesions occur in the buccal mucosa, the tongue being the next common site. Oral lichen planus is considered as a possible precancerous lesion on the basis of a number of reports in its malignant transformation⁴.

Materials and methods

This was a prospective study done in the Department with Pathology from 1990 to 1995. The biopsies were received from all units of the Dental Institute of Colombo. A detailed clinical history was obtained in a form of questionnaire regarding the area from which the patient comes, occupation, significant medical history, associated immunological disorders, history of betel chewing, smoking and the clinical nature of the lesion. All relevant investigations were recorded. The biopsies were processed, 8 micron thick sections were made and stained with haematoxylin and eosin.

Results

Out of 1000 biopsies received from the Dental Institute of Colombo during this 5 year period, 60 patients were confirmed histologically as oral lichen planus. In 0.9% of the patients the place of birth was not recorded and out of all the others 40% were from the western province. 29.1% were from the northern and central province. Other 30% were from other 13 provinces of Sri Lanka. Out of 60 patients 38 were males and 22 were females. The average age at presentation in males was 41 years and in females it was 48 years. Out of 60, the medical history was not available in 4 and from the rest, 4 had hypertension and 3 patients had diabetes. There were none who gave a history of having the same oral lesions in other members of the family. There was one female patient who was a diagnosed case of systemic lupus erythematosus. Out of 60 patients, 48 had white patches and white striations. 5 pa-

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tients had white striations with alternating erythematous areas. In 4, the lesions were erosive and 2 had pigmented areas intermingled with white striations. Out of 49 patients with white patches or striations, the majority occurred (35) in the buccal mucosa. Other lesions were found in the tongue palate and lip. Out of the 5 patients who had erosive lesions, 3 were found in the tongue and 2 in the buccal mucosa. One patient had atrophic lesions in the buccal mucosa.

Discussion

Disorders involving lichenoid tissue reactions are named because of a fancied or actual resemblance to certain lichens that form a scaly growth on rocks or tree trunks. Oral lichen planus is a relatively common condition. In the western literature its prevalence was reported to range from 0.1 to 0.6 percent⁴. A retrospective evaluation of 45 patients with oral lichen planus has been reported in Sri Lanka in 1995⁵. However to the best of my knowledge the prevalence of oral lichen planus has not been reported in Sri Lanka. Although an association with hypertension, diabetes and immunological disorders have been reported by some authors^{1,6}, in this study it was not possible to find any association with a significant illness. In this study males outnumbered females but in other studies women outnumbered men^{2,3}. However unlike in the skin, the oral lesions in lichen planus are usually striations. The age at presentation was earlier in males as the average of males was 42 and in females it was 46. In another study conducted in 1966 the highest number of males were in 35-54 year age group and the highest number of females were in 45-54 year age group.

Out of 38 males in this study, 14 gave a history of chewing betel only, and 11 were smokers. 10 were smokers and also gave a history of chewing betel. Out of 22 females, 7 gave a history of chewing betel. The number of patients in each category is not sufficient to make a statistical analysis especially when social habits are concerned.

In most of the studies conducted^{2,3}, majority of the lesions occurred in the buccal mucosa and tongue was the next common lesion. In this study too the majority of the lesions

occurred in the buccal mucosa and next common site was the tongue. Lesions occur in various clinical forms^{8,9}, such as white patches, erosive lesions and atrophic patches. The commonest lesion in this study was the white patch. There were 5 erosive lesions and out of 5, 3 occurred in the tongue and this can be attributed, to tongue being exposed to trauma and mechanical damage more than the other sites. 5 patients also had white patches with an erythematous area clinically referred to as red and white patches. The typical microscopic features of oral lichen planus are hyperkeratosis, acanthosis, degeneration of the basal layer and band like inflammatory infiltrate, predominantly of lymphocytes, in the subepithelium.

In pigmented lesions there was marked hyperkeratosis and increased amount of pigment incontinence in the subepithelium which would have contributed to its clinical form. In the patient who had atrophic lesion the squamous epithelium was thin, but all other features mentioned above were present. Oral lichen planus exhibits periods of regression and recurrence. Out of 60 patients, 20 patients were followed up for one year, 18 for two years only 4 patients were seen after the 4th year. The patient with the atrophic lesion was followed-up for 5 years. This patient gave up his habit of betel chewing and also smoking during this follow-up period. There was no evidence of malignant transformation in any of the patients in this study during this follow-up period. Malignant transformation rate in oral lichen planus has been reported to be 0.3%-10%^{4,10}. It is suggested that malignant transformation in this condition could be due to the interplay of factors such as the presence of erosive component, atrophic epithelium and the superimposed tobacco habits⁷. In this study none of the 5 erosive lesions could not be followed up for more than two years to comment on the fate of the lesions.

References

1. Karagoum EE, Dotsika EN, Sklarounou A. Alteration in peripheral blood mononuclear cell function and serum cytokines in oral lichen planus. *Journal of Oral Pathology Medicine*. 1994; 23(1): 28-35.

2. Brown RS, Bottomely WK, Peuento E, Lavigne GJ. A retrospective evaluation of 193 patients with oral lichen planus. *Journal of Oral Pathology Medicine* 1993; 22(2): 69-72.
3. Prabhu SR, Wilson DF, Daftary DK, Johnson NW. Oral disease in the tropics. *Offord University press Delhi*. 1995; 422-443.
4. Bernard NA, Scully C, Everson JW, Cunninham S, Porter SR. Oral cancer development in patients with oral lichen planus. *Journal of Oral Pathology Medicine*. 1993; 22(4): 421-424.
5. Preethika Angunawela. A retrospective evaluation of 45 patients with oral lichen planus. *Sri Lanka Dental Journal*. 1995; 24: (2) 71-72.
6. Ueta E, Umazume M, Yamamoto T, Osaki T. Leukocyte dysfunction in oral mucous membrane diseases. *Jouranl of Oral Pathology Medicine*. 1993; 22: (3) 120-125.
7. Murti PR, Bhonsle RB, Gupta PC, Metta FS, Pindborg JJ. Malignant potential of oral lichen planus. Observation in 722 patients from India. *Journal of Pathology*. 1986; 1571-77.
8. Shklar G, Ma Carthy PL. The oral lesions of lichen planus. Observation in 100 patients. *Oral Surgery, Oral Medicine and Oral Pathology*. 1961; 14: 164-18.
9. Shklar G. Lichen planus as an oral ulcerative disease. *Oral Surgery, Oral Medicine and Oral Pathology*. 1972; 33: 376-388.
10. Gawkrödger DJ, Stephenson TJ, Thomas SE. Squamous cell carcinoma complicating lichen planus. *Dermatology*. 1994; 188: (91) 39-49.