

ORAL LICHEN PLANUS — A STUDY OF FIFTY-FOUR CASES

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SUMMARY

Fifty-four patients with oral lichen planus were studied over a three-year period. The important sites were the cheek mucosa, tongue and gingiva. The reticular pattern was the most common type. The professionals and the white collar workers formed the majority of the cases. Emotional disturbances was a predominant factor in this lesion. The rate of malignant change ranges from one to ten percent. Treatment included reassurance, good oral hygiene, avoidance of hot and spicy foods and topical corticosteroids.

INTRODUCTION

Due to its moist environment, the clinical presentation of oral lichen planus is very different from its counterpart on the skin. Dermal lichen planus appears as a flat-top, violaceous to darkly coloured macular eruptions, very often associated with pruritis (Fig. 1). The oral lesion may present clinically in various forms. The commonest being the reticular type which appears as multiple white striae or laces which cross each other at many places (Fig. 2 and 3). At each point of intersection, a slightly raised red dot is frequently seen. Others include the annular (Fig. 2), papular, plaque, atrophic and erosive forms which are less commonly encountered.

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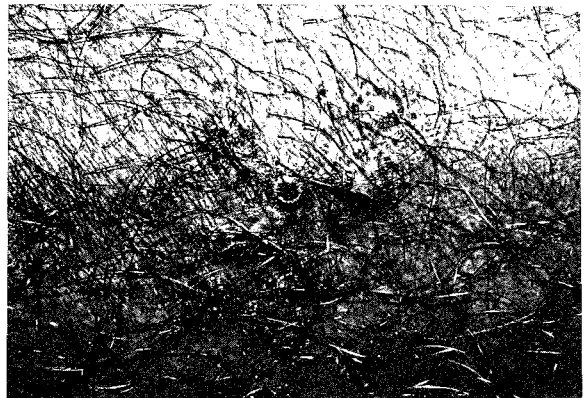


Fig. 1 Dermal lichen planus on the skin of the leg in various stages of healing.



Fig. 2 Reticular oral lichen planus is seen as striae on the buccal mucosa, whilst annular types are seen on the retromolar pad.

TABLE I
DISTRIBUTION OF SITES OF ORAL LICHEN
PLANUS IN 54 PATIENTS

Site	No. of Patients	Percentage
Both cheek mucosa	23	42.6
Unilateral cheek mucosa	6	11.1
Tongue	9	16.7
Lips	2	3.7
Gingivae	8	14.8
Floor of mouth	4	7.4
TOTAL	54	100

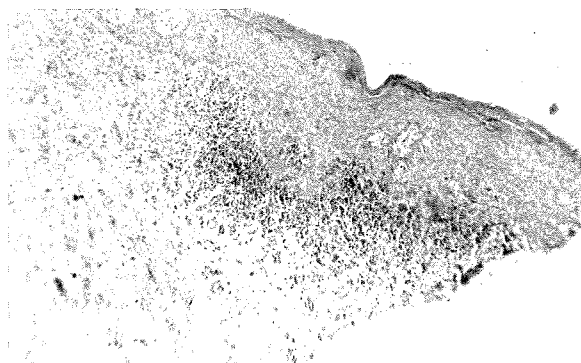


Fig. 3 A section of oral lichen planus through one lace. Note the hyperkeratinised surface, liquefaction degeneration of the basal layer of the epithelium, and the band of subepithelial chronic inflammatory cells. H & E X 100.

Oral lichen planus commonly precedes the skin lesion and is a disease of adults. Andreassen (1968) investigated oral lichen planus and found that only 44 percent of his patients had skin lesions. The most common sites are the buccal mucosa and the lips. This is followed by the gingiva, palate, tongue and floor of the mouth. It almost always occurs in a bilateral symmetrical fashion.

Patients with non-ulcerated lesions usually are symptom-free, although burning sensations may be felt. The atrophic type is so called due to extreme thinning of the covering epithelium and is prone to ulceration. The erosive type is very painful and patients are forced to seek treatment at an early stage of the disease.

The purpose of this paper is to present the clinical findings and management of patients with oral lichen planus.

MATERIALS AND METHODS

Fifty-four patients with oral lichen planus were examined and treated over a period of three years in the Department of Oral Pathology and Oral Medicine, Dental Faculty. The age, sex, occupation, type, site of lesions and the emotional states of the patients were recorded. The response to various types of treatment were recorded.

RESULTS

The ages of the patients ranged from 20-60 years. Thirty six (66.7 percent) and 18 (33.3 percent) were female and male respectively. The cheeks were

commonly affected and the sites of the lesions are presented in Table I. Only 3(5.5 percent) had associated skin lesions. The majority (35 patients) showed the reticular pattern with other types making up the rest. (Table II). Fifty percent of the patients were from group II occupational groups whilst housewives made up 14.7 percent (Table III). Thirty-five (64.8 percent) admitted to having various forms of chronic nervous states whilst the remainder were not aware of any emotional factors.

DISCUSSION

Lichen planus is a dermatologic disease of unknown aetiology. Women are known to be affected much more frequently than men. In this series, the oral lesion has a predilection for the cheek mucosa, occurring quite commonly in a bilateral distribution, with the tongue and the gingivae coming next. As with other world surveys, the reticular form is the most common. The occurrence of pigmented lesion appears to be quite high as compared to surveys done in many parts of Europe and America. Five out of six cases in the pigmented group were Indians. The author strongly feels that the melanin pigments which is inherently found in much more abundance in the oral mucosa of this race was responsible for the pigmented appearance of the lichen planus. Histological sections from such patients showed the presence of considerable amount of melanin granules subepithelially.

Many workers blamed emotional stress as being a predisposing factor in the causation of lichen planus. In the author's own experience, many patients with oral lichen planus displayed certain forms of emotional instability; many being of the nervous and high-strung types. In this survey alone, 35 (64.8 percent) patients had some form of emotional disorders. Fifty percent of the sufferers were the white-collar workers, followed closely by

TABLE II
MORPHOLOGY OF ORAL LICHEN PLANUS IN 54 PATIENTS

Morphology	No.	
	of patients	Percentage
Reticular	35	64.8
Papular	4	7.4
Annular	3	5.5
Linear	3	5.5
Pigmented	6	11.2
Erosive	3	5.6
TOTAL	54	100

the professionals and the housewives. The labourers, in contrast, had a low incidence of the lesion. It is well-known that the executive and professional groups are much more subjected to daily stresses, be it in the form of professional or family worries. Quite often, when such patients were free from daily stress of work during their long vacations, oral lichen planus regressed significantly. These findings, in the author's opinion, are strong indications to support the contention that emotional stress plays an important role in the development and progress of oral lichen planus.

There have been reports on the existence of an association between lichen planus and hypertension (Grinspan *et al* 1966, Howell & Rick 1973) and also diabetes mellitus (Grinspan *et al* 1966, Jolly 1972). Grupper and Avril (1965) described the triad consisting of lichen planus, hypertension and diabetes mellitus as Grinspan's syndrome. Recent studies were carried out by Christensen *et al* (1977a, 1977b) on the possible relationships between the three entities. They could not support the existence of any relationship between lichen planus and hypertension or diabetes mellitus.

Reports regarding the premalignant status of lichen planus are worrying. Dechaumie *et al* (1957) reported the rate of malignant transformation in oral lichen planus as being 10 percent, whilst Andreassen and Pindborg (1963) stated that carcinoma developed in between one and 10 percent. However, it is widely accepted that the erosive form of the lesion has a much higher rate of malignant change than any of the other types. In this series of 54 cases, no malignant change was detected in any of them. This was probably because these lesions have only been observed for over a short period of three years. Malignant transformations usually occur much later in the

TABLE III
DISTRIBUTION OF ORAL LICHEN PLANUS IN VARIOUS OCCUPATIONAL GROUPS IN 54 PATIENTS

Occupational Groups	No. of	
	patients	Percentage
Group I (Professionals)	11	20.4
Group II (White-collar workers)	27	50
Group III (Skilled labourers)	3	5.5
Group IV (Semi-skilled labourers)	4	7.4
Housewives	9	16.7
TOTAL	54	100

course of the disease.

The diagnosis of lichen planus is usually made clinically. However, when in doubt, biopsy of the lesion will quickly yield the diagnosis. The "single lace" technique of biopsy was used for all the lesions in each patient. In this technique, a single lace of lichen planus (for all types except the erosive type) was selected and a small elliptically-shaped piece of tissue around the lace was biopsied. Microscopic sections were prepared in a direction perpendicular to the long axis of the lace. In this way, the lesion could always be demonstrated under the microscope at whatever level the section was cut. The diagnosis of lichen planus was made when the sections fulfilled the following requirements as stated by Shklar (1972): 1) Hyperkeratinisation (ortho or para) of the surface epithelium 2) Subepithelial band of chronic inflammatory cells, chiefly lymphocytes and 3) Liquefaction degeneration of the basal layer of the epithelium. All these features are shown in Fig. 3.

The management of oral lichen planus is varied. The symptomatic lesion needs no active treatment. Reassurance is very essential to eliminate the patient's fear of cancer. Good oral hygiene must be stressed on the patient as it is known that without sepsis, the lesion would have a good prognosis.

Mechanical trauma from ill-fitting oral prostheses as well as chemical trauma from hot, spicy and highly-seasoned foods should be avoided as they only act as irritants to the already disturbed epithelium of the lesion. The emotional states of the patients must be appreciated and treated accordingly. This is a vital factor which is too often overlooked. Some authors advocated the use of tranquilisers in the high-strung and cancerophobic cases. However, the author did not find any need

for such drugs in this group of patients. With the above regimes, most of the patients with non-erosive lesions in this series responded well. For the three erosive lichen planus, topical corticosteroid was used and complete remission occurred in one patient. Two patients had recurrences after variable periods of remission and are still under regular supervision.

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