Lichen Spectrum: An In-Depth Exploration of the Clinical Tapestry in 150 Patients with Oral Lichen Planus

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ABSTRACT

Introduction- Lichen planus (LP) is characterized by inflammation impacting both the skin and mucous membranes, with its precise etiology still elusive. This study seeks to uncover the comprehensive clinical characteristics of individuals diagnosed with Oral Lichen Planus (OLP).

Materialsand methods- A thorough examination was performed on 150 dental records, encompassing key patient information including gender, age, chief symptoms, lesion distribution, clinical forms, extra oral involvement, medication usage, systemic diseases, and habits related to tobacco and/or alcohol consumption, as well as betel nut chewing. Data analysis was performed using SPSS

Results- A retrospective analysis was conducted on a total of 150 dental records from patients with a confirmed diagnosis of oral lichen planus (OLP). Among these, biopsies were performed in 64 patients, while the remaining 86 patients. The cohort comprised 82 women and 68 men, resulting in a female-to-male ratio of 32:43.

Conclusion- The study findings align with prior research, affirming the consistent nature of most characteristics examined. Given the chronic and inflammatory nature of Oral Lichen Planus (OLP) with a notable recurrence rate, the imperative for early detection, accurate diagnosis, and prolonged follow-up becomes evident. This approach is crucial for assessing exacerbations and monitoring the potential for malignant transformations over the long term.

Keywords- oral lichen planus, chronic, inflammatory disorder

INTRODUCTION

Lichen planus (LP) is an inflammatory disorder affecting the skin and mucous membranes, and its exact cause remains unknown. It manifests as itchy, violet-hued papules and plaques, often appearing on areas like the wrists, lower back, and ankles. Distinctive white lines forming a lattice-like network, known as Wickham striae, overlay the lesions and are particularly noticeable on the buccal mucosa, where erosions may also occur. Drug-induced lichen planus, or lichenoid drug eruption, often exhibits a distribution pattern influenced by sunlight but can closely resemble the non-drug-induced form.The progression of LP can vary significantly. For many patients with cutaneous lesions, spontaneous clearance occurs within 1 to 2 years following the initial presentation.[1]Nevertheless, recurrences are frequent, and residual hyperpigmentation of the skin is a common outcome. In contrast, oral lichen planus is characterized by its chronic nature, with the possibility of remission being variable. In cases of drug-induced lichen planus, resolution typically occurs gradually after discontinuation of the causative medication.[2]Several agents have been linked to the onset of LP, with notable attention given to the association with viruses, particularly the hepatitis C virus (HCV). Individuals with LP are five times more likely to test positive for HCV compared to the general population, and those with HCV seropositivity face 2.5 to 4.5 times higher odds of developing LP.[3]Contact allergies to various metals present in dental restorations, such as mercury, copper, and gold, have been correlated with oral lichen planus. Notably, the clearance of LP lesions has been reported upon the removal of the sensitizing metal.[4]While the disease commonly resolves on its own, the persistent itching and painful mucosal erosions contribute to substantial morbidity. Current primary treatments involve the use of topical and/or systemic corticosteroids. Additionally, immunosuppressant may be employed as corticosteroid-sparing agents, although they may not always provide adequate disease control. Emerging as promising future options are Janus

kinase inhibitors and biologics targeting anti-IL-12/23 and anti-IL17 pathways.

MATERIALS AND METHODS

A thorough examination was performed on 150 dental records, encompassing key patient information including gender, age, chief symptoms, lesion distribution, clinical forms, extraoral involvement, medication usage, systemic diseases, and habits related to tobacco and/or alcohol consumption, as well as betel nut chewing.

RESULTS

A retrospective analysis was conducted on a total of 150 dental records from patients with a confirmed diagnosis of oral lichen planus (OLP). Among these, biopsies were performed in 64 patients, while the remaining 86 patients declined. Table 1 provides insights into the age and gender distribution of all OLP patients. The cohort comprised 82 women and 68 men, resulting in a female-to-male ratio of 32:43. The age of the patients ranged from 20 to 80 years, with an average age of 54.4 ± 12.7 years. The age groups of 40-49 years old and 50-59 years old exhibited the highest prevalence of OLP in women and men, respectively.

Table 1: Age and gender distribution of 150 patients with OLP.

Age group	Males(n)	Females(n)	Total(%)
20-29	2	1	3(2%)
30-39	3	4	7(4.6%)
40-49	19	31	50(33.33%)
50-59	28	20	48(32%)
60-69	10	17	27(18%)
70-79	5	9	14((9.33%)
80-89	1	0	1(0.67%)
Total	68	82	150

In the medical history analysis, a significant number of patients reported a history of medication use and systemic diseases. The most prevalent systemic diseases, listed in descending order along with the corresponding numbers, were hypertension (57, 38%), diabetes mellitus (42, 28%), liver disease (31, 20.67%), heart disease (21, 14%), epilepsy (17, 11.34%), and kidney disease (12, 8%). Notably, the majority of patients identified as non-smokers, non-drinkers, and non-betel nut chewers.Among the patients included in the study, 125 individuals (83.33%) exhibited symptoms related to oral lichen planus (OLP), while 25 patients (16.66%) were asymptomatic. The OLP lesions were commonly found in multiple locations, with a higher prevalence in the buccal mucosa, followed by the gingiva, labial mucosa, tongue, palate, and floor of the mouth. Extra oral involvement, affecting the skin, was reported by only 5% of the participants. The atrophic form of OLP was the most prevalent among the identified lesions, followed by the reticular form, erosive/ulcerative form, papular form, and plaque-like form. All patients had no family history of OLP or malignant transformation. 142 of OLP patients were treated with topical steroid and only 8 patients were treated with a combination of topical and systemic steroid.

DISCUSSION

In general, the clinical profiles of patients in the present study are consistent with the other studies. Results of this study showed that most of patients were female(82) who have higher prevalence of OLP than male(68) counterpart (32:43 ratio). However, Munde *et al.* reported of male predominance in Indian OLP patients.[5] The study identified a significant association between oral lichen planus (OLP) and various systemic diseases.[6] Notably, many of the patients in the present study had a history of systemic conditions such as hypertension, diabetes mellitus, thyroid gland disorders, and liver disease. The use of pharmacological treatments, coupled with the geriatric age of the patients, is likely to contribute to the presence of co-morbidities and may play a role in the pathogenesis of OLP.[7,8]While factors like smoking, alcohol consumption, and betel nut chewing are known to heighten the risk of both oral lichen planus (OLP) and malignancy, it's essential to note that non-smokers, non-drinkers, and non-betel nut chewers can still experience malignant transformation of OLP lesions. In the current study, the majority of patients were non-smokers, non-drinkers and non-betel nut chewer, and no evidence of malignant transformation of OLP lesions was observed in these individuals.[9,10,11] However, given the prolonged existence of OLP in many patients, there might be an increased risk of malignant transformation over time. Therefore, it is crucial for individuals with long-standing OLP to undergo careful, long-term monitoring by experienced clinicians.Oral lichen planus (OLP) can be effectively treated through various approaches, including topical and/or systemic steroid therapy, photo chemotherapy, and photodynamic therapy.[11] Potent topical steroids are often recommended as the initial treatment for symptomatic OLP, with various formulations such as orabase, ointment, solution, spray, or mouthwash being utilized.1[2] Asymptomatic OLP may not require

treatment, but regular follow-ups are advised. In this study, patients received treatment predominantly through topical applications, with some cases involving a combination with systemic steroids. [9,10]Additionally, managing OLP involves addressing sources of irritation, such as sharp cusps, broken restorations, and non-opposing teeth, while maintaining good oral hygiene has proven beneficial. Long-term follow-up is advisable, particularly for patients with complicated OLP or those who do not respond well to initial treatments. Areas of tissue that show resistance to treatment may necessitate further evaluation, potentially leading to a biopsy if malignancy is suspected. This underscores the importance of careful monitoring and appropriate intervention in the management of OLP.

CONCLUSION

The study findings align with prior research, affirming the consistent nature of most characteristics examined. Given the chronic and inflammatory nature of Oral Lichen Planus (OLP) with a notable recurrence rate, the imperative for early detection, accurate diagnosis, and prolonged follow-up becomes evident. This approach is crucial for assessing exacerbations and monitoring the potential for malignant transformations over the long term.

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