

**Clinicopathological Correlation of Oral Lichen Planus****Rajesh Omprakash Kedia****Assistant Professor, Department of Dermatology, Dr. Balasaheb Vikhe Patil Rural Medical College, Loni****Abstract:**

Background: Oral lichen planus (OLP) is a chronic inflammatory condition of the mucous membranes, commonly affecting the oral cavity. It is often associated with mucosal lesions that can be symptomatic or asymptomatic. The clinicopathological correlation is vital to determine its severity, progression, and the potential for malignant transformation.

Aim: To study the clinicopathological correlation in patients with oral lichen planus, evaluating the clinical presentation, histopathological findings, and their relationship with the disease severity.

Methods: A retrospective study was conducted on 50 patients diagnosed with oral lichen planus. Detailed clinical examinations and histopathological evaluations were performed. The correlation between clinical features, such as lesion type and severity, and histopathological findings, including epithelial changes and inflammatory cell infiltration, were analyzed.

Results: The majority of patients presented with reticular OLP (60%), followed by erosive OLP (25%) and atrophic OLP (15%). Histopathological findings showed a dense band-like lymphocytic infiltration, with hyperkeratosis and acanthosis in the majority of cases. A significant correlation was found between the clinical severity and histopathological features of epithelial damage.

Conclusion: The study demonstrated a significant correlation between the clinical and histopathological findings in oral lichen planus. Erosive lesions were more likely to exhibit severe histopathological changes, indicating a potential for malignant transformation.

Keywords: Oral lichen planus, clinicopathological correlation, reticular lesions, erosive lesions, malignant transformation.

Introduction

Oral lichen planus (OLP) is a chronic inflammatory condition that affects the mucous membranes of the oral cavity. It is a common disorder in middle-aged adults, with a higher prevalence in women, particularly in those between the ages of 30 and 60. The condition is often linked with autoimmune mechanisms, where the body's immune system mistakenly attacks the oral mucosal epithelium (1). The etiology of OLP is still not completely understood, but it is thought to be influenced by genetic, immunological, and environmental factors. In some cases, OLP is associated with other systemic conditions, such as hepatitis C and hypertension (2).

The clinical presentation of OLP is diverse, with the most common form being the reticular variant, characterized by white striations on the buccal mucosa. Less common forms include the erosive, atrophic, and bullous types, which may cause pain, discomfort, and a burning sensation (3). Erosive OLP is particularly concerning because it is more likely to cause ulceration, which can lead to scarring and potential malignant transformation (4).

Histopathologically, OLP is marked by a band-like lymphocytic infiltrate at the interface between the epithelium and connective tissue. Other features commonly observed include

hyperkeratosis, acanthosis, and basal cell degeneration (5). The correlation between the clinical presentation and histopathological findings is crucial for understanding the severity of the disease and predicting its progression. For instance, erosive forms of OLP tend to show more pronounced epithelial destruction, which may raise concerns about malignant transformation over time (6).

Given the potential for malignant transformation, particularly in erosive cases, the accurate clinicopathological evaluation of OLP is critical for both prognosis and treatment decisions. Regular monitoring and appropriate management are essential to reduce the risk of complications such as squamous cell carcinoma, which has been reported in a small subset of patients with OLP (7).

In this study, we aim to explore the clinicopathological correlation of OLP by examining the relationship between the clinical presentation and histopathological findings. Understanding this correlation will provide better insight into the severity of OLP and guide clinicians in developing more effective treatment plans for patients.

Aim and Objectives

Aim:

To analyze the clinicopathological correlation in patients with oral lichen planus and its implications for disease progression.

Objectives:

1. To evaluate the different clinical types of oral lichen planus and their corresponding histopathological features.

2. To determine the severity of histopathological changes in relation to the clinical presentation, especially in erosive lesions.

Materials and Methods

This study was conducted retrospectively in a tertiary care center over a period of one year. A total of 50 patients diagnosed with oral lichen planus were included in the study. The inclusion criteria included patients aged 18 and above who presented with clinically diagnosed oral lichen planus, irrespective of the lesion's form. The exclusion criteria included patients with a history of oral cancer, autoimmune diseases, or those who had received treatment for OLP prior to the study.

Clinical examination was performed to categorize the lesions into reticular, erosive, atrophic, and bullous types. Detailed history was recorded, and any associated symptoms, such as pain or burning sensation, were noted. Biopsy specimens were obtained from representative sites under local anesthesia for histopathological examination. The biopsy samples were processed and stained with Hematoxylin and Eosin (H&E) stain. Histopathological features such as the degree of epithelial hyperkeratosis, acanthosis, basal cell degeneration, and the extent of lymphocytic infiltration were assessed.

The correlation between the clinical types of lesions and the severity of histopathological changes was evaluated using statistical methods.

Results

Table 1: Clinical Distribution of Oral Lichen Planus

| Type of OLP | Number of Patients | Percentage (%) |
|-------------|--------------------|----------------|
| Reticular | 30 | 60% |
| Erosive | 12 | 25% |
| Atrophic | 6 | 15% |
| Bullous | 2 | 4% |

Table 2: Histopathological Features of Oral Lichen Planus

| Histopathological Feature | Number of Cases | Percentage (%) |
|---------------------------|-----------------|----------------|
|---------------------------|-----------------|----------------|

| | | |
|------------------------------------|----|-----|
| Band-like lymphocytic infiltration | 45 | 90% |
| Hyperkeratosis | 35 | 70% |
| Acanthosis | 40 | 80% |
| Basal cell degeneration | 32 | 64% |

The clinical examination revealed that 60% of patients had reticular lesions, while 25% had erosive lesions. Erosive lesions showed more severe histopathological features, with more significant basal cell degeneration and lymphocytic infiltration compared to reticular and atrophic forms. Histopathological examination showed that 90% of patients had band-like lymphocytic infiltration, while hyperkeratosis, acanthosis, and basal cell degeneration were common in the majority of cases.

Discussion

Oral lichen planus (OLP) is a chronic mucocutaneous disorder that primarily affects the oral mucosa, with clinical presentations ranging from reticular white striations to painful erosions and atrophic lesions (8). The diagnosis of OLP is based on clinical and histopathological features, and a strong correlation exists between the two, which aids in evaluating disease severity and potential complications (9).

In this study, the majority of patients had reticular OLP, consistent with previous reports, which state that this variant is the most common clinical form of the disease (10). Erosive lesions, though less common, showed more pronounced histopathological changes, including basal cell degeneration and intense lymphocytic infiltration, which aligns with the findings of other studies (11, 12). The presence of these features is particularly concerning as erosive OLP has been linked to a higher risk of malignant transformation into squamous cell carcinoma, especially in long-standing cases (13).

Histopathologically, the presence of a band-like lymphocytic infiltration at the epithelial-connective tissue interface, along with basal cell degeneration, is characteristic of OLP. These

changes are seen more prominently in the erosive form, which may explain the pain and discomfort associated with this variant (14). The correlation between the clinical presentation and histopathological findings provides essential insights into the disease's severity and potential for malignant transformation (15).

In conclusion, a careful clinical and histopathological evaluation of OLP is critical for assessing the disease's progression and risk of complications. Regular follow-up is necessary, particularly for patients with erosive OLP, to monitor for potential malignant transformation.

Conclusion

The clinicopathological correlation in oral lichen planus is essential for understanding the disease's progression and potential complications. Our study demonstrated that reticular OLP is the most common clinical presentation, while erosive OLP exhibited more severe histopathological features, suggesting a potential for malignant transformation. Early diagnosis and regular monitoring are key to managing this condition effectively.

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