Review Article

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Oral Lichenoid Lesion: A Diagnostic Dilemma

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ABSTRACT

Background: Oral lichenoid lesions or reactions (OLLs/OLRs) are clinical and histological contemporaries of the classical oral lichen planus (OLP) that have generated a lot of chaos in the literature. In contrast to the idiopathic nature of OLP, OLLs are often associated with a known aggravating factor. A superficial examination of these lesions clinically and histologically often reveals many similarities with OLP, but recent data showed that many distinguishable features do exist and form the basis of most classifications. We hereby report a case of an oral lichenoid lesion in a male patient who was previously diagnosed with vitiligo and was under Unani medication.

Keywords: Lichenoid lesion, lichen planus, histopathology of OLP.

INTRODUCTION

Oral mucosa is affected by several lichenoid lesions, the etiology of which is attributed to infective, inflammatory, dysplastic, and immune-mediated conditions, resulting in distinct disease entities in terms of diagnosis and prognosis. Yet, their clinical and histopathologic features overlap and create a diagnostic dilemma for the clinician as well as pathologists. Overlapping of features is due to the presence of intense inflammatory cells in the juxtaepithelium. To further complicate the issue, the use of generic terminology "lichenoid," which is a histopathologic description for inflammatory cells in the stroma, has created a source of confusion in segregating lichenoid lesions. [(1)]

The term "lichenoid tissue reaction" was first coined by Pinkus, in 1973, for the histological pattern showing the damage to the keratinocytes, now referred to as apoptosis, infiltrate of the inflammatory cells in the connective tissue which may extend into the epithelium. [(2)] OLRs occur in the mucosae which remain in direct contact with the causative agent. They generally represent a type IV hypersensitivity reaction. This reaction will occur in a small susceptible population group by the accumulation of the causative agents in healthy and/ or damaged oral mucosa resulting in white patches (which are non-scrapable) in reticular fashion, plaques, papules, ulcerations, or erosions, similar to that found in OLP; hence, the term "lichenoid" given to this reaction.[3]

Considering all the clinical and histological variations under oral lichenoid lesions, we hereby present a case of 42 yrs. Male patient with the histopathological report showing features of lichenoid reaction.

CASE REPORT

A 42year male patient came with a chief complaint of burning sensation in the mouth for six months. He complaints of, aggravation of burning sensation on having spicy food and on drinking hot beverages. Patient has no habit of smoking or tobacco chewing. He was diagnosed with Vitiligo 6 months earlier before he suffered from burning sensation in the mouth. He started using topical Unani medication on the lower lip.

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Fig 1: 42yr male patient showing white patches over the labial surface of lower lip.

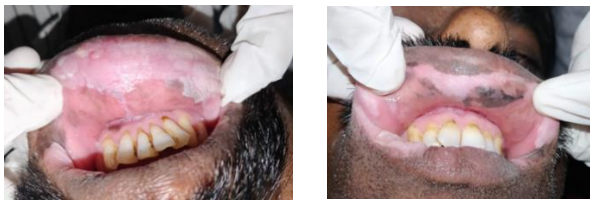

Fig 2: Intraoral examination showed non scrapable white patches which are focally erosive.

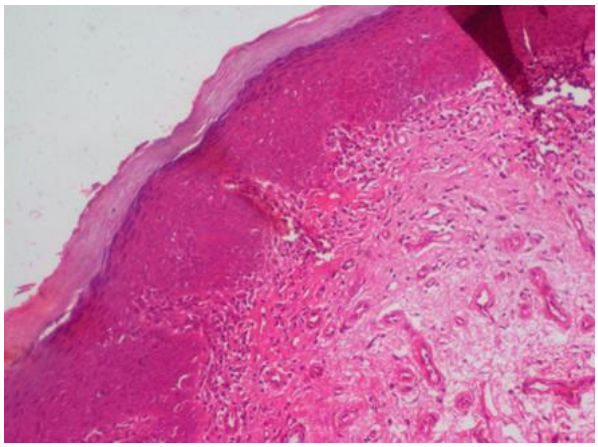

Fig 3: Parakeratinized stratified squamous, with variable thickness and short rete ridges.

On extraoral examination, white patch was noticed over the inner aspect of the lower lip. Intraoral examination revealed greyish white elevated plaque with a corrugated appearance in lower labial mucosa extending from 34 to 44 region and an erythematous area from 32 to 41 region along lower labial mucosa. The hypopigmented area was seen over both maxillary and mandibular labial mucosa extending up to buccal mucosa. The lesion was non-scrappable and non-tender. The provisional diagnosis was given as lichen planus \ Verrucous leukoplakia.

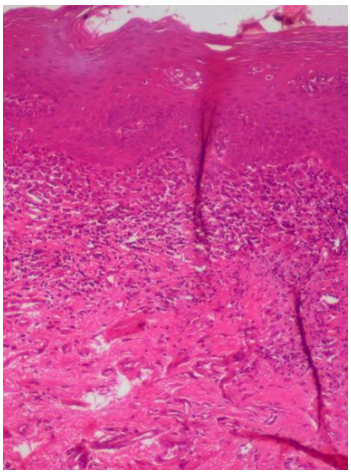

Fig 4: Dysplastic features like hyperkeratosis, cellular, and nuclear pleomorphism were noticed with sub epithelial band of inflammatory cell infiltrate.

A biopsy was performed for confirmation separately on lower labial mucosa. H and E staining of soft tissues over the right side showed epithelium and connective tissue. The epithelium was parakeratinized stratified squamous, with variable thickness and short rete ridges. Some areas showed atrophic epithelium, whereas some areas showed hyperplastic epithelium. Dysplastic features like hyperkeratosis, cellular, and nuclear pleomorphism were noticed. The underlying connective tissue was fibrovascular with dense collagen bundle fibers, and mild inflammatory cell infiltrate. Numerous endothelial lined blood capillaries and extravasated RBC were present. In focal areas, a dense subepithelial band of inflammatory cells was noticed. Clinical and histopathological features suggested of lichenoid reaction with dysplastic features ie lichenoid dysplasia.

DISCUSSION

Oral lichen planus, leukoplakia, oral submucous fibrosis and the lichenoid reaction was taken into consideration. Leukoplakia and oral submucous fibrosis were ruled out due to the absence of habits, i.e., no habit of tobacco chewing, alcohol, or smoking. The histopathological report showed much resemblance towards oral lichen planus expects the absence of basal cell degeneration. Later on, the lichenoid reaction was considered as a final

diagnosis when the patient gave a history of topical application of Unani medicine over the lower labial mucosa.

Distinguishing lichenoid lesions from one another with closely resembling clinical and histopathologic features creates a diagnostic problem. Hence, it is necessary for the pathologists to be familiar with the clinicopathologic patterns of oral lichenoid disorders to develop the accurate diagnostic and prognostic assessment.

Van der Waal I updated the classification of OLL, [4] which distinguished these lesions into four types.

Classification of oral lichenoid lesions:

- Amalgam restoration, topographically associated OLL
- Drug-related OLL
- OLL in chronic graft versus host disease
- OLL, unclassified (e.g.,erythematous changes limited to the gingiva without signs of "classic" OLP elsewhere in the oral cavity, or lesions that have a lichen planus like aspect but lack one or more characteristic clinical features, such as a bilateral presentation)

World Health Organization proposed a set of diagnostic criteria to differentiate OLP and OLL clinically and histopathologically :

Clinical criteria

- Presence of bilateral, more or less symmetrical lesions
- Presence of lace-like network of slightly raised gray-white lines (reticular pattern)
- Erosive, atrophic, bulbous and plaque type lesions are only accepted as a subtype in the presence of reticular lesions elsewhere in the oral mucosa.
- In all other lesions that resemble OLP but do not complete the criteria above, the term clinically compatible with should be used.

Histopathologic criteria

- Presence of well-defined band-like zone of cellular infiltration that is confined to the superficial part of the connective tissue, consisting mainly of lymphocytes.
- Signs of liquefaction degeneration in the basal cell layer
- Absence of epithelial dysplasia.
- When the histopathologic features are less obvious, the term histopathologically compatible with should be used.

A final diagnosis of OLP or OLL

To achieve a final diagnosis, clinical as well as histopathologic criteria should be Included.

A diagnosis of OLP requires fulfillment of both clinical and histopathologic criteria.

The term OLL will be used under the following conditions:

1. Clinically typical of OLP but histopathologically only"compatible with" OLP
2. Histopathologically typical of OLP but clinically only"compatible with" OLP
3. Clinically "compatible with" OLP and histopathologically"compatible with" OLP.

The possible malignant transformation of OLP is an ongoing, controversial discussion in the literature. Krutchkoff et al. assigned the term lichenoid dysplasia (LD) to any lesion which shows dysplasia with lichenoid features. LD has a true propensity for malignant transformation. It is neither a variant nor a transitional form of OLP. The two conditions share essentially no pathogenetic relationships, but their similarity is the presence of lichenoid inflammatory infiltrate. In OLP, lichenoid infiltrate represents cell-mediated immune response provoked by different antigens, whereas in OLD, lichenoid infiltrate represents immune surveillance mechanism against atypical epithelial cells. [5]

Adding to futher dilema, histopathologic assessment of OLP is rather subjective and insufficiently reproducible, [6] and in a few instances, histopathological features may not be accurate for diagnostic, as OLP evolves through a cycle of exacerbation and quiescence. Biopsy in any time

helps to differentiate whether the lesion is of the inflammatory origin or the epithelium consists of underlying atypical features . So,in the case of OLL, histopathological features are not confirmatory. Thus, weather in OLP or OLL, the final diagnosis has to be confirmed by clinicopathological correlation.

CONCLUSION

OLL are the mucocutaneous diseases with indistinguishable clinicopathological features and may create a diagnostic dilemma. In spite of similar clinicopathological features, etiology, diagnosis, and prognosis differ, which mandates the classification of OLL. Hence, it is essential for the clinician and pathologist to be familiarize with the individual variations among clinicopathological features of OLL. It still is unclear whether a patient with OLP has an independent risk of experiencing malignant transformation to SCC, or whether areas of oral epithelium with a premalignant potential—perhaps even areas with molecular changes manifesting clinically as normal or histologically with unrecognized atypia that is not yet dysplasia—evoke a nonspecific "lichenoid response" that causes them to enter the inflammation-carcinogenesis loop. [7] Hence early and appropriate diagnosis involving malignant transformation is necessary to avoid the worst of scenario.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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