Case Report

Squamous Cell Carcinoma arising in Oral Lichen Planus

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ABSTRACT

It has been argued that Oral Lichen Planus (OLP) may increase the risk of oral cancer. Patients with OLP may be at an increased risk for developing of OSCC (Oral Squamous Cell Carcinoma). Here, the author reports a case of OLP initially presenting with a clearly benign OLP lesion that transformed into OSCC over a course of 18 months. This report may provide a clear evidence for OLP lesion as a potential pre-malignant state.

Key words: Lichen Planus Oral, Precancerous Conditions, Oral Squamous Cell Carcinoma.

INTRODUCTION

Is Oral Lichen Planus (OLP) a premalignant lesion? Should patients with OLP be advised? That they have a precancerous lesion? Oral Lichen Planus (OLP) is a relatively common chronic inflammatory disease of the oral mucous membranes affecting 0.5% to 1.9% of population [1,2]. OLP is common in middle- aged to older individuals, and affects women about three times as often as men [3].OLP lesions persist for many years with periods of exacerbations and remissions; complete permanent resolution is rare [3,4]. Lesions usually occur bilaterally on buccal mucosa, but gingiva, dorsal and lateral tongue surfaces can also be involved (3).Clinically OLP can present in 6 major types: reticular ,popular, plaque like , atrophic , erosive and bullous of which the reticular OLP is the most common type [1,4]. Most studies suggest the patient with OLP is at an increased risk rate for developing of Oral Squamous Cell Carcinoma [5,-7]. For women, the risk is higher than men [8,9]. The estimated incidence for malignant transformation is 1-2.3% of all OLP in a mean time of 5 -7 ½ years [10,11,12]. The malignant transformation occurs most frequently in the erosive form of OLP (35%), followed by the plaque type (24%) and the reticular type (11%).The most common locations are buccal mucosa (49%), tongue (39%), lower lip (10%) and floor of the mouth (2%). Here, a case of OLP is reported that developed to OSCC. The important point of this report is the microscopic slides showing clearly malignant transformation of OLP that had not been shown in previous similar reports.

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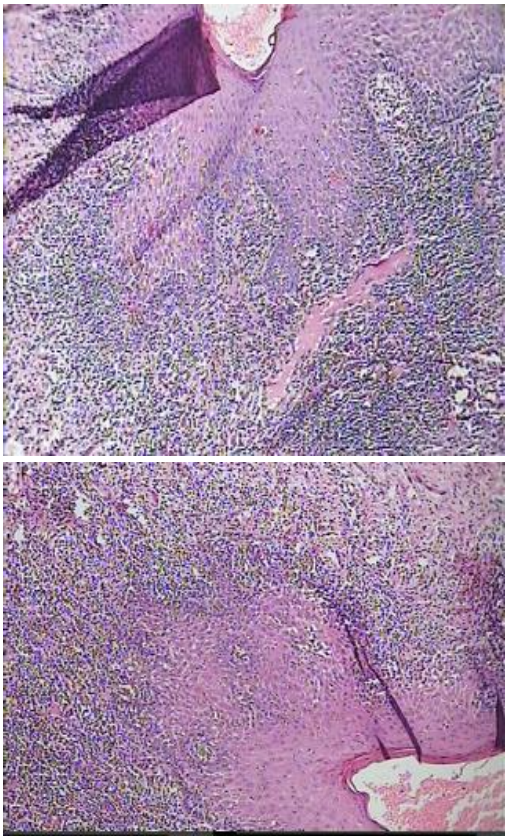
CASE REPORT

Our patient was a 45 year old woman with a past history of OLP, 18 months ago. In oral examination, areas of reticular lesions of the buccal mucosa and a plaque type lesion measured 4 x 3 covering the dorsal surface of her tongue were seen. The right side of this originally white, keratotic lesion developed into a persisting ulcer measured 3 x 3, four months before presentation. She did not smoke nor drink alcohol and she didn't have family history for malignancy. In physical examination, a white keratotic area was observed on the left side of the tongue that was ulcerated on the right side. An incisional biopsy was performed under local anesthesia. She was referred to Oral Pathology Department of Dental Faculty of the University of Hamadan after undergoing the biopsy preparation. In histopathological examination, hypergranulosis, acanthosis, basal layer hydropic degeneration and Civatte bodies were observed within oral

epithelium. A band- like infiltration of lymphocytes in the upper lamina propria was also seen (Figures 1&2&3). The above clinical and histological findings constitutes the classic pathologic presentation of OLP [(11)].Divided by a sharp contour, malignant changes were readily distinguished in the epithelium adjacent to the OLP area (Figure 4). Pleomorphic cells and keratin pearls were seen, all indicating a clear diagnosis of Oral Squamous Cell Carcinoma (2) (Figure 5). She went under surgery and then she received chemotherapy but unfortunately, before receiving complete treatment she died.



Figures: 1&2. Photomicrographs show hypergranulosis, acanthosis and a bandlike infiltration of lymphocytes immediately subjacent to the epithelium(x 100).

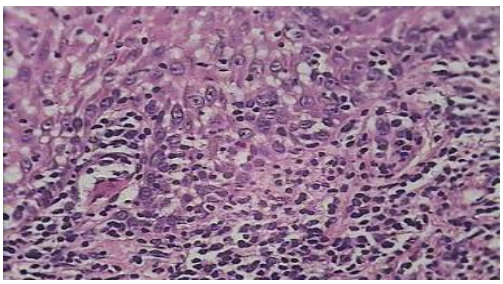


Figure 3. Degeneration of the basal cell layer of the epithelium(x 400).

Figure 4. Sharp contour of OLP and malignant transformation(x 100).

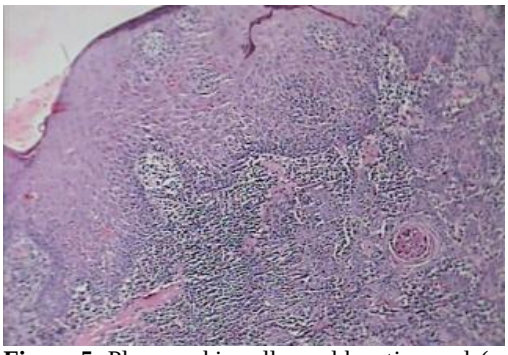


Figure 5. Pleomorphic cells, and keratin pearls(x 400).

DISCUSSION

Oral Lichen Planus (OLP) is a relatively common chronic inflammatory disease of the oral mucous membranes .There is a good deal of overlap of both the clinical and histological features in many lichenoid lesions. Oral lichenoid lesions (OLLs) should be considered in differential diagnosis of OLP.Four types of OLLs are: 1) amalgam restoration, 2) drug related lichenoid lesions, 3) lichenoid lesions in chronic graft versus host disease, 4)lichen planuslike lesions [(13)]. OLLs are unilateral, near dental restorations or associated with drugs [(14)].

Clinical diagnosis of OLP should be made only in the case of lesions when classic lacelike lichenoid lesions are present bilaterally on buccal mucosa or contiguous areas. Diagnosis of asymmetric lesions (unilateral) especially in cancer-prone areas (floor of mouth, lateral border and ventral surface of the tongue, retromolar areas and soft palate-uvula) may be difficult [13,15].

In 1978 ,WHO provided a set of histopathological criteria for OLP [13].Histopathological criteria are :presence of a well defined "band-like" cell infiltrate, confined to the superficial portion of the connective tissue and composed primarily of lymphocytes, signs of "liquefactive degeneration" of the epithelia basal cell layer and absence of epithelial dysplasia. Other features are seen tooth rete ridges, hyperkeratosis and/or atrophy, apoptotic keratinocytes (Civatte bodies), ragged separation of epithelium from lamina properia due to basal cell destruction [4,14, 15,16].

World Health Organization has considered both OLP and OLL at risk of malignant transformation(15).Some authors have suggested that terms such as 'OLP with atypia ' or 'OLP with dysplasia'should not be used .Eisenberg designated these lesions as 'atypical or dysplastic lichenoid oral lesions' later referred as 'atypical lichenoid stomatitis and'lichenoid dysplasia'.On the other hand, there are some evidence that epithelium in OLP may develop dysplasia.Mignogna et al reported the presence of severe dysplasia/carcinoma in situ in patients with OLP (17). There is increasing evidence for malignant transformation of OLP [13].

As mentioned before, OLP occur most often in middle-aged. Overtime, lesions may progress to an erosive or ulcerative stage. Any chronic red and white lichenoid mucosal lesion , especially present on recognized cancer-prone sites should be considered as malignant transformation of OLP.Malignant transformation has been most frequently associated with atrophic and erosive forms of OLP (5,18). Dorsum of the tongue is not a common site for SCC and only 4% of OSCC occur in this site [1,2].

Oral Squamous Cell Carcinoma is a world-wide health problem. In addition to external exposures (smoking and alcohol), certain oral lesions (e.g. leukoplakia, erythroplakia, and OLP) may increase the risk of oral cancer (2).According to Krutchkoff et al., another criteria for diagnosis of OLP as a premalignant lesion is the absence of exposure to known carcinogenic factors like tobacco or alcohol [19].

In the case described above, OLP initially presented in a 45 year old woman with a clearly benign OLP that lasted for approximately 14 months before transforming into an ulcerative OSCC in the course of 4 months which shows the short duration of development of SCC. The patient described here presented an association between plaque-type OLP and OSCC. Our patient did not smoke nor drink alcohol without family history of any type of cancer. The microscopic slides were clear evidence to develop malignancy on a histologically benign lesion.

CONCLUSION

The malignant potential of OLP is not predictable. It is advisable to carry out a follow-up of patients with OLP.

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