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Malignant transformation potential of oral lichen planus; Review and update

Mostafa Esmaeili¹, Zahra Amoozad Khalili²

¹ Assistant Professor of department of Oral Medicine, Faculty of Dentistry, Shahed university, Tehran, Iran

² Resident of department of Oral Medicine, Faculty of Dentistry, Shahed University, Tehran, Iran

Introduction:

Oral lichen planus (OLP) is one of the most common diseases of the oral mucosa. Clinically, it has specific and clearly identifiable features. The prevalence in the general population is 1% to 2%. OLP is the target of much controversy, especially in relation to its potential for malignancy. Many cases of oral squamous cell carcinoma (OSCC) developing in patients with OLP presenting with no epithelial dysplasia have been reported.

Materials and Methods:

We searched the PubMed database from 2003 to 2017 with key words of "oral lichen planus", "dysplasia", "Malignancy" and "biopsy" separately and together. We limited articles to english-language articles about studies involving human participants which published in peer-reviewed journals.

RESULTS:

One of the most important issues concerning OLP is its potential for malignant transformation into OSCC. Sarah G. Fitzpatrick et al, reported Among 7,806 patients with OLP, 85 developed SCC. The overall rate of transformation was 1.09 percent for OLP. In another study, the rate of transformation was 3.2 percent. It seems that there is a slight predominance of female patients among those who experienced malignant transformation. The most common subsite of malignant transformation was the tongue. The average time from diagnosis of OLP to transformation was 51.4 months. Critics have pointed out that some cases of OLP that progressed to OSCC were misdiagnosed as OLP from the beginning, and that lichenoid lesions presenting dysplasia via biopsy should be excluded from the diagnosis of OLP. Recently, most follow-up studies have applied strict clinical and histological diagnostic criteria and some of these have suggested malignant potential of OLP. Based on recent reports, the overall malignant transformation rate of OLP is estimated to be 1–2%, and higher rates of transformation in Italian reports may be due to a high prevalence of HCV infection. The preferential sites of OSCC which develops from OLP lesions are the tongue and buccal mucosa, and the incidence is higher in the former than the latter, while epithelial dysplasia in OLP is more prevalent in the buccal mucosa. Most cases of OSCC associated with OLP are found on the lateral side of the tongue, as is common of OSCC. Smoking and alcohol use are evidently not risk factors for OSCC development in patients with OLP. In another study of 45 patients with histologically diagnosed OLP without dysplasia at the time of the initial diagnosis, 20 patients subsequently had a single transformation event, and 25 had multiple transformation events including multifocal dysplasia and/or malignancy. Their results suggest that not only is OLP itself a risk factor for malignant transformation, but that there may also be field cancerization in OLP.

CONCLUSION

Although the incidence of malignant transformation of OLP remains controversial; careful, regular, and long-term follow-up of patients with OLP is required for the early detection of malignant transformation from OLP. The follow-up interval ranges from 2 months to annually. If erosive changes are evident in lesions at follow-up visits, additional biopsies are mandatory and the follow-up intervals should be shortened. Still, a biopsy for histopathology is mandatory to confirm the primary clinical diagnosis and mainly to exclude epithelial atypia and signs of malignancy. Direct immunofluorescence is used when there is suspicion of other diseases, such as pemphigus and pemphigoid.