Oral Lichen Planus: Malignant Potential?

Oral lichen planus (OLP) is a chronic inflammatory disease and it is classified as one of potentially malignant disorders of the oral mucosa.\(^1\) Many studies from different parts of the world have looked for the association between OLP and malignant potential.\(^2\) A higher incidence of malignant transformation was found among smokers, alcoholics, and Hepatitis C virus (HCV) infected patients; however, these associations should be further investigated.\(^4\) Although the malignant transformation of OLP is still a controversial issue, the overall rate of approximately 1.09% has been reported.\(^5\) Our recent report showed squamous cell carcinoma arising in plaque-like OLP after 7-years of follow-up.\(^6\) Therefore, the lesions particularly plaque, atrophic or erosive/ulcerative types of OLP should be closely followed-up by the oral medicine specialists.

Interestingly, there was a previous report about the function of melatonin in oral mucosa that may play a cytoprotective role through its anti-oxidative and anti-inflammatory properties.\(^7\) Moreover, previous studies hypothesized that chronic inflammation possibly induces the local biosynthesis of melatonin in OLP and may relate to epithelium changes or the progression of the oral lesions.\(^8,9\) A recent review presented that tumor-like microenvironment, including hypoxic, inflammatory, immune and acid microenvironment mediates its potentially malignant transformation in OLP.\(^10\) Furthermore, there is an increase evidence suggesting that the role of cell adhesion molecules (CAMs) and alterations in the adhesion properties regarding in tumor development.

The modification in the intercellular adhesion is the hallmark of malignant cells and might contribute in the deranged cellular interactions characteristic of cancer. Changes in the expression or function of CAMs have been implicated in all steps of tumor progression.\(^11,12\)

Taken together, tumor-like microenvironment including, inflammatory process, immunomodulatory role and CAMs in such chronic lesions could contribute malignant potential in OLP. The possible malignant transformation of OLP is still needing further studies. These are the reasons that is why longstanding atrophic or erosive/ulcerative OLP need closed follow-up.

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REFERENCES


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