

Expression of Apoptotic Signaling Protein p53 and Cell Proliferation Associated Protein Ki-67 in Oral Lichen Planus and Oral Squamous Cell Carcinoma

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Oral Lichen Planus (OLP) is a chronic inflammatory oral mucosal disease that appears to be related to a cell mediated-immune process. In OLP destruction of the basal cell layer as well as changes in cell proliferation, cell repair and cell death occur in the injured mucosal epithelium. Histologically OLP is characterized by hyperkeratosis, basal cell liquefaction and intense infiltration of lymphocytes at epithelial-connective tissue interface. It has been suggested that OLP may be a premalignant lesion since oral squamous cell carcinoma (OSCC) have been observed in few patients affected by OLP. The aim of this study was to examine the expression of apoptotic signaling protein p53 and the cell proliferation associated protein Ki-67 in OLP and OSCC in order to evaluate possible transition of OLP to OSCC. We examined epithelial cell proliferation using Ki-67 labelling index (LI) in OLP and compared it to OSCC. Moreover we examined the expression of p53 in OLP and OSCC to detect any association of p53 expression with increased cell proliferation. The present study was conducted on twenty patients who were divided into two groups. Group I included 10 patients with OLP with age range 36 to 64 years. While group II included 10 patients with OSCC with age range 44 to 70 years. Oral mucosal biopsies were obtained from both patients and immunohistochemically stained with p53 and Ki-67 antibodies. The number of p53 and Ki-67 positive cells in the basal and suprabasal layers of oral epithelium in OLP and OSCC mucosal specimens was calculated. The results of the present study revealed that the mean of p53 expression in OSCC was significantly higher than in OLP ($P=0.002$). Similarly, the mean of Ki-67 expression in OSCC was significantly greater than in OLP ($P=0.001$). From the present work it can be concluded that the probability of neoplastic transformation of OLP is low.