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Short communication

Apoptosis in oral lichen planus

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Apoptotic cell death may be a contributory cause of basal cell destruction in oral lichen planus (OLP). Therefore, the purpose of this study was to investigate the rate of apoptosis in OLP and the expression of two proteins (FasR and FasL) regulating this process. Biopsies from 18 patients with histologically diagnosed OLP were investigated, with comparison to normal oral mucosa of healthy persons. For visualisation of DNA fragmentation, the TUNEL method was used. In order to characterise the infiltrating cell population (CD3, CD4, CD8) and expression of FasR and FasL, we used an immunohistochemical technique. The results showed that T cells dominated in the subepithelial cell infiltrate. Within the epithelium the apoptotic cells were confined to the basal cell layer, and more apoptotic cells were seen in areas with basal cell degeneration and atrophic epithelium. There was a prominent expression of FasR/FasL in OLP, with a rather uniform distribution throughout the infiltrate. In the epithelium, the FasR/FasL expression was more abundant in the basal cell area compared to the suprabasal cell layer. In conclusion, apoptosis within the epithelium is significantly increased in situ in OLP compared to normal oral mucosa, and seems to be related to the epithelial thickness.