ORIGINAL RESEARCH

Comparison of Calretinin Expression in Ameloblastoma, Odontogenic Keratocyst and Oral Epithelial Dysplasia: An Immunohistochemical Study

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ABSTRACT

Introduction: Oral epithelial dysplasia is a potentially precancerous lesion diagnosed histologically. While the risk of progression is associated with histological grade, it is currently impossible to predict accurately which lesions will progress. More accurate markers predicting progression to cancer would enable the targeting of these lesions for more aggressive treatment and closer follow-up. Calretinin is a calcium-binding protein involved in calcium signaling with a wide spread distribution in normal and neoplastic tissues. It is a well-established marker for epithelial mesothelioma and ameloblastoma and expression has been described increasingly in other neoplasms. **Objective:** The objective of this study was to determine the expression of

calretinin in oral epithelial dysplasia and its possible specificity as an immunohistochemical marker in grading of dysplasia. **Methodology**: Fifteen cases of oral epithelial dysplasia, of which five were mild dysplasia, five moderate and other five of severe dysplasia, two cases each of acanthomatous ameloblastoma, KCOT, lipoma and normal epithelium were studied. Sections were immunohistochemically stained with calretinin antiserum using a standard avidin±biotinylated peroxidase complex method. The slides were analyzed for positivity to the marker and its varying expression through the three grades of dysplasia. **Results:** Negative staining was seen in 15 cases of oral epithelial dysplasia while the staining was positive and of moderate intensity in acanthomatous ameloblastoma restricted to the stellate reticulum-like epithelium especially in areas of squamous metaplasia. The other cases gave a negative effect on immnunohistochemical staining by calretinin. **Conclusion**: The biological significance of calretinin expression in tumourogenesis and premalignancy is not known and its use as a distinctive, specific immunohistochemical marker for dysplastic cells remains to be confirmed.