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Expression of the Tumour Suppressor Gene p53 in Odontogenic Cysts

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**Abstract:** The protein p53 seems to be related to the suppression of cell proliferation. Positive tissues appear to have a higher proliferative activity than negative tissues. Mutation of the p53 tumour suppressor gene has been demonstrated in a large proportion of human head and neck tumours, although no formal evidence of functional aberration has been shown p53 may have importance during the early stage of malignancy. The aim of this study was to evaluate the role of the p53 tumour suppressor gene in the pathogenesis of odontogenic cysts. Expression of abnormal p53 protein is a widely recognised marker of malignancy. Expression of p53 was evaluated immunohistochemically in a retrospective study of formalin-fixed, paraffin-embedded tissue. Forty cases of odontogenic cysts were examined for expression of p53 protein by a immunohistochemical technique and positive results of the p53 protein were demonstrated by nuclear staining. Twenty-seven of 40 odontogenic cyst cases were positive for p53 protein. The differences between the groups were statistically significant (P = 0.02). The incidence of p53 protein nuclear accumulation detected by immunohistochemistry is high in odontogenic lesions. The present data indicate that p53 inactivation plays a role both in the initiation and in the progression of odontogenic cysts.

**Key Words:** Odontogenic cysts, p53 protein, immunohistochemistry

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