

COMPARISON OF THE EXPRESSION OF PROLIFERATING CELL NUCLEAR ANTIGEN (PCNA) IN RECURRENT AND NON-RECURRENT AMELOBLASTOMAS: AN IMMUNOHISTOCHEMICAL STUDY

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Ameloblastoma is a benign but locally aggressive tumour which is derived from the odontogenic epithelium and some patients present with recurrence. Pattern of recurrence of ameloblastoma depends on various factors including histological type, age and treatment modality. Proliferating cell nuclear antigen (PCNA) is a nuclear protein synthesised in the late G1 and S phase of the cell cycle and immunohistochemical detection of this protein represents a useful marker for the proliferating activity of tissues.

The aim of this study is to evaluate the proliferating activity of ameloblastomas and its correlation to the recurrence. In this study PCNA expression was studied in 16 cases of ameloblastoma using two step horse reddish peroxidase method (indirect method) on routinely processed paraffin sections. Decalcified specimens using strong acids were excluded from this study as decalcification denatures proteins. Out of the 16 cases, 7 were recurrent ameloblastomas. Nuclei showing a clear brown colour were regarded as positive. In order to compare the PCNA activity in recurrent and non-recurrent ameloblastomas positive cells and total cell numbers (minimum of 500 cells) were counted in the strongest positive area.

Recurrent ameloblastomas had a significantly higher PCNA labelling index (23.99 ± 2.14) than non-recurrence (12.87 ± 3.56) This result is statistically highly significant. ($P < 0.001$) The present study suggests that the PCNA labelling index may be of use as a predictor for the recurrence of ameloblastoma.