

بررسی بروز آنتی ژن های MDM2 و P53 در کیست‌های دنتی جروس، رادیکولار و رزیدوال به روش ایمنو هیستوشیمی

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Evaluation of MDM2 and P53 Expression in Dentigerous, Radicular and Residual Cysts by Immunohistochemistry

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Introduction: Dentigerous cyst (the most common developmental cyst), periapical cyst (the most common jaw cyst) and residual cyst may transfer to neoplasm. In this study, the expression of P53 & MDM2 (cell proliferative regulators) and their relation to proliferation and transformation of these cysts were evaluated.

Materials & Methods: In this cross-sectional study, expressions of P53 and MDM2 markers in 60 samples of paraffin blocks (20 samples for each cyst) were examined by Immunohistochemistry method and the percentage, intensity, and location of involved epithelial cells were evaluated. Statistical tests included one way ANOVA and Tukey test for evaluation of expression, and Kruskal-Wallis for intensity comparison and Kendall for detecting correlation between markers.

Results: Periapical cyst showed complete expression of markers. Severity, percentage and depth of MDM2 expression were higher than P53. Marker expression for residual cyst was highly intensive and also in full thickness of epithelium, but it was basillary with lower intensity in dentigerous cyst. Expression of P53 and MDM2 had significant differences in these three cysts ($P=0.01, 0.03$ respectively), and also significant difference for percentage and severity of MDM2 between the three groups ($P=0.003, 0.001$ respectively). There was a positive linear correlation between P53 and MDM2 expression ($P<0.001$).

Conclusion: In residual cyst, there was a correlation between increase in MDM2 and P53 expression, but not in periapical cyst. Dentigerous cyst failed to strongly express each of the markers. Nevertheless, it could be said that increase in expression of these markers could be related to pathogenesis and neoplastic transformation of these cysts.

Key words: Dentigerous cyst, radicular cyst, residual cyst, P53, MDM2.

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