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YAP1 and P53 Expression in Papillary Thyroid Carcinoma

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Abstract:

Background and Objective: One of the most prevalent endocrine system cancers is papillary thyroid carcinoma with complicated predisposing factors and pathogenesis. YAP1 (Yes-associated protein 1) is a well-known oncogene; its activity is increased in a variety of human malignancies and has recently been paid great attention. The present study examines YAP1 and P53 immunohistochemical expression in papillary thyroid carcinoma and investigates the association of their expression with the available clinicopathologic risk factors to assess their possible prognostic role.

Materials and Methods: The current study used paraffin blocks of 60 cases of papillary thyroid carcinoma, which were immunohistochemically assessed for YAP1 and P53 expression. The study examined the association of their expression with clinicopathologic characteristics.

Results: YAP1 expression was observed in 70% of papillary thyroid carcinoma cases. A statistically significant relation was observed between YAP1 expression and tumor size, tumor stage, tumor focality, lymph node metastases and extrathyroidal extension (P values were 0.001, > 0.001, 0.037, 0.025 and 0.006) respectively. P53 expression was observed in 85% of papillary thyroid carcinoma cases. A statistically significant relation was observed between P53 expression and tumor size (P=0.001) and tumor stage (P> 0.001). A statistically significant relation was noticed between YAP1 and P53 expression (P value= 0.009).

Conclusion: YAP1 expression was found to be associated with many high-risk clinicopathologic characteristics in patients with papillary thyroid carcinoma and with P53 expression; thus, it seems that YAP1 may have a specific impact on the patient's outcome.

Keywords: YAP1, P53, papillary thyroid carcinoma.