

IMMUNOHISTOCHEMICAL EXPRESSION OF CK-19 IN THYROID NODULES AND ITS CORRELATION WITH HISTOPATHOLOGY.

ABSTRACT

BACKGROUND:

Thyroid lesions are common worldwide with a prevalence of 40 million per year. Differentiation of benign and malignant thyroid nodules by hematoxylin and eosin staining alone is difficult because of overlapping patterns and nuclear features. Immunohistochemistry is an useful ancillary technique that aids in arriving at correct diagnosis of controversial cases.

AIM:

To study the immunohistochemical expression of cytokeratin19 in various types of thyroid nodules and its correlation with histopathology.

METHODS:

In this study we observed the immunohistochemical expression of cytokeratin19 in 30 thyroidectomy specimens, received from July 2014- July 2015 which included classic papillary carcinoma (11 cases, one with node metastasis), follicular variant of papillary carcinoma (2 cases), follicular adenoma (15 cases) and follicular carcinoma (4 cases).

RESULTS:

The staining results of cytokeratin19 showed diffuse and strong 3+ positivity in (8 cases out of 9) classic papillary carcinoma and only one case showed moderate 2+ positivity. Follicular variant of papillary carcinoma showed varied intensity of staining (1 case- 1+ positivity and other showed 2+ positivity). Majority of follicular adenoma (13 cases out of 15) and follicular carcinoma (3 cases out of 4) cases showed negative staining. Only two follicular adenoma cases and one follicular carcinoma case showed focal, weak 1+ positivity.

CONCLUSION:

Cytokeratin19 is found to be a sensitive and specific marker in diagnosing classic papillary carcinoma. It does not differentiate follicular adenoma and follicular carcinoma. Its role in differentiating follicular variant of papillary carcinoma and follicular carcinoma cannot be concluded as we studied minimum number of these cases and they showed varied intensity of staining. Hence it needs a further detailed research in future.

Key words: Classic papillary carcinoma, Follicular variant of papillary carcinoma, follicular adenoma, follicular carcinoma, cytokeratin19.