

MIXED AND SIMULTANEOUS OCCURRENCE OF MEDULLARY AND PAPILLARY CARCINOMA OF THE THYROID GLAND: A REPORT OF THREE CASES

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Background/Purpose: Mixed and simultaneous occurrence of papillary carcinoma (PTC) and medullary thyroid carcinoma (MTC) is a rare instance and the exact diagnosis of this uncommon phenomenon is important.

Methods: We report the simultaneous occurrence of MTC and PTC in three cases.

Results: Case1 was diagnosed as PTC upon fine-needle aspiration (FNA) biopsy and total thyroidectomy (TT), along with bilateral neck dissection (BND), were performed. Preoperative calcitonin (CT) level was 37815pg/ml and immunohistochemical studies demonstrated a PTC in the one nodule and MTC in an additional lesions with lymph node metastases from MTC.

Case2 had a 55x53mm nodule in the right lobe and normal preoperative CT level. The patient underwent TT and immunohistochemical studies showed the presence of two intermingled components: MTC and PTC. Then, he underwent BND, and histological examination revealed two metastatic nodes from MTC. Case3 is presented with multinodular goiter, which was diagnosed as chronic lymphocytic thyroiditis upon FNA biopsy. She underwent TT and immunohistochemical studies revealed micro MTC in the right lobe and PTC in the both lobes. Two years after surgery, BND was performed due to suspicion of recurrence and no metastasis was found. RET gene was found to be negative in all patients.

Discussion & Conclusion: PTC and MTC can develop as a mixed carcinoma in the same lesion or as a collision tumor in different areas of the thyroid gland. The exact diagnosis of these rare presentations of PTC and MTC are important to determine treatment strategy and perform genetic screening to exclude multiple endocrine neoplasia 2 syndromes.