

Betül Ekiz-Bilir<sup>1</sup>, Neslihan Soysal-Atile<sup>1</sup>, Zehra Dağlı<sup>2</sup>, Ufuk Çoşkun<sup>3</sup>

<sup>1</sup>Tekirdag State Hospital, Endocrinology Department, Tekirdag, Turkey

<sup>2</sup>Tekirdag State Hospital, Pathology Department, Tekirdag, Turkey

<sup>3</sup>Tekirdag State Hospital, General Surgery Department, Tekirdag, Turkey

## INTRODUCTION

Papillary thyroid cancer (PTC) is the most frequent thyroid tumour. Medullary thyroid cancer (MTC) however, is uncommon and more aggressive. Both PTC and MTC may have genetic alterations. We report a case of coexistent medullary and papillary carcinomas in two different foci in a patient with family history of TPC in a first-degree relative.

## CASE

A 65-year-old female was admitted to our outpatient clinic because of multinodular goiter (MNG). On clinical examination, nodules of approximately 3 cm on the both lobes was palpated. She had a family history of thyroid papillary carcinoma in her elder sister. Free thyroxine (FT4), triiodothyronine (FT3) and thyroid-stimulating hormone (TSH) levels were within normal limits. All other clinical and laboratory examination was normal. Neck ultrasound (US) displayed multiple, solid, hypo-echoic nodules of the thyroid gland. The biggest nodule is 30x24x32 mm at the inferior pole of left lobe, includes cystic area macro-calcifications. And another nodule of 22x17x27 mm which is localized on the junction of the right lobe to the isthmus includes punctuate calcifications. The results of fine needle aspiration cytology (FNAC) of the both nodules were benign. Patient preferred surgery because the nodules are large and she has a family history of thyroid carcinoma in a first-degree relative.

Histopathology results revealed MTC which is 4 mm in diameter in the right lobe and PTC follicular variant 12 mm in diameter in the left lobe, capsule invasion was negative and lymph nodes were negative for the carcinoma. Postoperative calcitonin was 56 pg/ml (<150 pg/ml but detectable) and CEA was in normal limits. Because PTC is >1 cm, RAI ablation was planned. Completion thyroidectomy and lymph node dissection also performed. No residue was detected by post-operative neck US. Neck and chest CT and liver MRI which were performed for MTC metastasis were all negative. RET protooncogen mutation was negative unless BRAFV600E mutation was positive.

Patient's younger sister was also examined for MNG. Thyroid US displayed solid, hypoechoic nodules > 2 cm in both lobes. FNAC of nodules were reported as suspicious for PTC. Patient underwent total thyroidectomy and central lymph node dissection. Histopathology results revealed TPC which is 5 mm in diameter (occult) in the right lobe and 18 mm in diameter in the left lobe, capsule invasion was negative and lymph nodes were negative for the carcinoma.

## CONCLUSIONS

FNAC is the most accurate method for evaluating thyroid nodules. False negative rate of FNAC is about 5% so malignancy risk of benign FNAC results should be kept in mind especially with a positive family history of thyroid carcinoma in a first-degree relative. We presented a coincidental coexistence of MTC and PTC case to point to this risk.

