

Neslihan CUHACI¹, Husniye BASER², Oya TOPALOGLU¹, Didem OZDEMIR¹, Aydan KILICARSLAN³,
Reyhan ERSOY¹, Bekir CAKIR¹

¹Yildirim Beyazıt University, Faculty of Medicine, Ataturk Education and Research Hospital, Department of Endocrinology and Metabolism, Ankara, TURKEY

²Ataturk Education and Research Hospital, Department of Endocrinology and Metabolism, Ankara, TURKEY

³Yildirim Beyazıt University, Faculty of Medicine, Ataturk Education and Research Hospital, Department of Pathology, Ankara, TURKEY

INTRODUCTION

➤ In recent years, due to the improvements in ultrasonography (US), it has become possible to gain more information about the papillary thyroid carcinoma (PTC) and papillary thyroid microcarcinoma (PTMC).

➤ However, whether PTC and PTMC exhibit the same ultrasonographic features and behave same features is controversial.

➤ We aimed to evaluate the patients diagnosed with PTC and PTMC in terms of clinical, ultrasonographical (US) and histopathological features and their relationships with tumor size.

METHODS

➤ We retrospectively evaluated 881 patients who underwent thyroid surgery between 2007 and 2014 in our clinic and diagnosed with PTC histopathologically were enrolled the study.

➤ Demographic characteristics, US findings and histopathological features were evaluated.

RESULTS

➤ After exclusion of incidental tumors, preoperative US features were available in 314 tumors in the PTC group and 221 tumors in the PTMC group.

➤ Irregular border were significantly more common in the PTMC group, but presence of peripheral halo, microcalcifications, and macrocalcifications were significantly more common in the PTC group. In addition, isoechoic appearance was more frequent in the PTC and hypoechoic appearance was more frequent in the PTMC group (p=0.011).

➤ PTMC group was further classified according the tumor size; ≤5 mm, and >5 mm. Of these 221 nodules 53 (24%) were in the ≤5 mm, 168 (76%) were in the >5 mm group. Irregular border were significantly more common in patients > 5 mm group than those in the ≤ 5 mm group.

➤ The presence of halo was significantly more common in the ≤ 5 mm group.

➤ In total, multifocality rate was 32.9%, and it was significantly higher in PTMC group than the PTC group (28.95% vs 6.95%, respectively, p<0.001).

➤ Histopathological features of 904 nodules in the PTMC group and 360 nodules in the PTC group were analyzed. The rate of incidentality was 4.3% in the PTC group, whereas 73.7% was in the PTMC group (p<0.001). Lymphatic, vascular and capsular invasion, ETE, lymph node metastasis were significantly higher in the PTC group than the PTMC group.

➤ When subgroup analysis was made in PTMC, 591 carcinomas were in the ≤5 mm group and 313 were in the >5 mm group. Multifocality rate was significantly higher in the >5 mm PTMC group than the ≤5 mm group (38.9% vs 25.6%, p=0.001). Incidentalities were significantly higher in the ≤5 mm compared to >5 mm group (90.5% vs 41.1%, p<0.001). In PTMC > 5 mm, capsular invasion, ETE, and lymph node metastasis were significantly more common than ≤ 5 mm PTMC. Lymphatic and vascular invasion were similar in two group.

CONCLUSION

➤ Since the incidentalities rates were found significantly more common in our patients with PTMC and those with ≤5 mm, ultrasonographic features of the nodules should be evaluated carefully and for cases which are suspicious with US, US-guided fine needle aspiration biopsy (FNAB) should be considered in order to make the correct treatment strategy.

➤ Also our study revealed that PTC and >5 mm PTMC groups compared to PTMC and ≤5 mm groups respectively, have more aggressive histopathological features.