COMPARISON OF CLINICOPATHOLOGICAL FEATURES IN PATIENTS WITH FAMILIAL AND SPORADIC PAPILLARY THYROID CANCER

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Introduction

➢ Although, familial medullary thyroid cancer is a known condition, familial papillary thyroid cancer (PTC) is a rare and less well described clinical entity. While some studies suggest more aggressive features in familial PTC, some do not support these findings. We aimed to compare ultrasonographical, cytopathological and histopathological results of patients with familial and sporadic PTC.

Methods

➢ Data of 194 patients diagnosed with PTC histopathologically between 2007-2016 were retrospectively reviewed. PTC in ≥2 members of the family was defined as familial PTC. Thyroid functions, ultrasonography features, cytological and histopathological findings were compared in familial and sporadic PTC

Result

➢There were 35 tumor foci in 20 familial and 253 foci in 174 sporadic PTC patients. Gender, thyroid functions, thyroid autoantibody positivity, mean nodule number, thyroidectomy indications and surgical approach were similar in two groups. Preoperative ultrasonography features were available in 20 familial and 112 sporadic nodules.

➢ There was not any significant difference in mean nodule diameter, echogenity, texture, microcalcification, macrocalcification, presence of hypoechoic halo, taller than wide shape, margin irregularity and vascularization pattern. Cytological results were distributed similarly in two groups (p=0.433). In histopathological examination, mean tumor number was 1.79±0.98 in familial and 1.46±0.77 in sporadic patients (p=0.09). Mean tumor diameters were 6.26±4.10 mm and 9.87±11.62 mm in familial and sporadic tumors, respectively (p=0.074). Multifocality, microcarcinoma rate, variants of PTC, vascular invasion and extracapsular extension were similar (p=0.155, p=0.239, p=0.239, p=0.617 and p=0.743, respectively). Capsular invasion was significantly increased in sporadic group (19.8% vs 5.9%, p=0.049).

Conclusion

➢ Whether familial PTC is more aggressive than the sporadic form of the disease is controversial. Clinical, ultrasonographical, cytological and most of the histopathological features of familial and sporadic PTC were identical in our study. Early detection of cases other than index patients might cause diagnosis at an earlier stage of the disease in familial form.

	Familial PTC (n=20)	Sporadic PTC (n=174)	p
Tumor foci	35 (12.2%)	253 (87.8%)	
Tumor number	1.79±0.98	1.46±0.77	0.090
Tumor diameter (mm)	6.26±4.10	9.87±11.62	0.074
Multifocality	47.4%	31.2%	0.155
Microcarcinoma rate	76.5%	66.4%	0.239
Vascular invasion	0%	2.4%	0.617
Extracapsular extension	5.9%	8.7%	0.743
Capsular invasion	5.9%	19.8%	**0.049**