A CANCER OF UNDETERMINED SIGNIFICANCE: INCIDENTAL THYROID CARCINOMA

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Introduction

Thyroid nodules are commonly encountered in the general population, and the incidence of thyroid cancer (especially papillary thyroid carcinoma) is increasing. The rising incidence of thyroid carcinoma can be attributed in part to improved ultrasound imaging and increased detection of incidental thyroid carcinomas (ITC). We aimed to compare ITC with nonincidental ITC (NITC) in this study.

Methods

➢ Retrospective analyses of 906 individual patients who were operated for benign and malign thyroid disease in our hospital between December 2006 and September 2014 and had a final histologic diagnosis of thyroid carcinoma were enrolled in this study. All patients underwent ultrasonographic examination and FNA biopsy was performed for all nodules >1 cm and nodules ≤1 cm with at least one of the suspicious ultrasonographic findings as irregular margins, hypoechoism, increased internal vascularity and presence of microcalcifications. The lesions in thyroidectomy specimens that did not represent the FNA or ultrasonographic nodule target were classified as ITC. The lesions that match with FNA results or ultrasonographic features were classified as NITC. Characteristics of ITC and NITC were compared in this study.

Results

➢ There were 1301 cancer foci in histopathology specimens. Among all these cancer foci, 434 were detected incidentally while 867 were detected non-incidentally. In this study, 779 (89.9%) of nonincidental cancer foci were papillary cancer (PTC), 47 (5.4%) were follicular cancer, 12 (1.4 %) were medullary cancer and 29 (3.3%) were other thyroid cancers (undifferentiated thyroid cancer and thyroid tumors of uncertain malignant potential) (Table 1). All of the incidental cancer foci were PTC. Mean age was 51.7±11.11 in ITC group and 48.15±13.1 in NITC group (p<0.001) (Table 2). Mean size was 13 mm (1-90 mm) in NITC group while it was 3 mm (0.1-20 mm) in ITC group and differed significantly between the groups (p<0.001). Tumor size was ≤1 cm for 98.8% of ITC group while 54.1% of NITC group were ≤1 cm. Frequency of capsular invasion (29.1%/7.9%), extrathyroidal extension (13%/4.2%) non-complete resection (9.2%/1.8%), and lymph node metastasis (9.5%/1.8%) were significantly higher in the NITC group (p<0.001. Persistent/recurrent disease in patients with NITC were more frequent than patients with ITC (p=0.004). This result was the same for the tumor ≤1 cm (p=0.001).

Table 1-Histological types of cancer in 906 thyroidectomized patients

Types of Thyroid Cancer	NITC	ITC	Total	p
Papillary cancer	779 (89.9%)	434 (100%)	1213	
Follicular cancer	47 (5.4%)	0	47	
Medullary cancer	12 (1.4%)	0	12	<0.001
Other cancer	29 (3.3%)	0	29	
Total	867	434	1301	

NITC; Non-incidental thyroid cancer. ITC; Incidental thyroid cancer.

Table 2- Comparison of NITC and ITC groups

	NITC	ITC	p
Age	48.15±13.1 (19-84)	51.67±11.11 (22-79)	<0.001
Size of carcinoma	13 mm (1-90 mm)	3 mm (0.1-20 mm)	<0.001
Size of the carcinoma < 1 cm	469 (54.1%)	429 (98.8%)	<0.001
Presence of capsular invasion	29.1%	7.9 %	<0.001
Presence of extrathyroidal extension	13 %	4.2 %	<0.001
Complete resection	90.8 %	98.2%	<0.001
Presence of lymph node metastasis	9.5 %	1.8 %	<0.001
Presence of metastasis	3 (0.5%)	0	0.3
Persistence /Recurrence	9.1%/5.2	3.7%/0	0.004
Persistence /Recurrence of carcinoma < 1 cm	9.2%/4.7%	3.7%/0	0.001

NITC; Non-incidental thyroid cancer. ITC; Incidental thyroid cancer.

Conclusion

➢ ITC is often encountered in older patients and frequently determined in early stages and had better prognosis that can relieve the clinicians.