

Indications for fine-needle aspiration in spongiform thyroid nodules

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Dear Editor,

For spongiform thyroid nodule that is not autonomous (suspected by low TSH and confirmed by ¹³¹I or ¹²³I scintigraphy), unless the patient has a high risk of malignancy, (i) the Brazilian Society of Endocrinology and Metabolism recommends fine-needle aspiration (FNA) if the nodule is ≥ 2 cm (1); (ii) the British Thyroid Association not recommends FNA (2); and (iii) the American Thyroid Association recommends FNA if the nodule is ≥ 2 cm, but ultrasonographic follow-up without biopsy is considered to be an acceptable alternative (3).

We report the results of 165 patients who had at least one nodule > 5 mm that showed spongiform appearance on ultrasonography [defined as an aggregation of multiple microcystic components with thin echogenic walls in more than 50% of the nodule volume (2-7)], for a total of 180 nodules with this appearance. The size of these nodules ranged from 8 to 42 mm. In seven patients with low TSH, ¹³¹I scintigraphy showed that five nodules were autonomous. Among the remaining 175 spongiform nodules, cytology was benign in 160, insufficient in 10, and indeterminate in five. There was no case of malignant or suspicious cytology. Eight patients with insufficient cytology and four with indeterminate cytology were submitted to thyroidectomy and histology revealed malignancy in only one of the spongiform nodules. No nodule growth was seen in the three patients with insufficient or indeterminate cytology not submitted to surgery after a minimum follow-up of 24 months. Among spongiform nodules ≥ 2 cm ($n = 108$), five were autonomous, 97 were benign, cytology was insufficient in three, and indeterminate in three. Histology revealed the benign nature of the last six nodules.

The present results support the high probability of a benign condition of spongiform nodules, even if the nodule is ≥ 2 cm. These data, together with previous studies (4-7), favor the recommendation that FNA is initially not necessary in cases of nodules with spongiform appearance and is only indicated if the nodule grows during ultrasonographic follow-up, or should be restricted to high-risk patients. The table 1 shows the rates of malignancy reported in the present study and in other series (4-7) on spongiform thyroid nodules.

Table 1. Rate of malignancy in thyroid nodules with spongiform appearance on ultrasonography

Study (reference)	Rate of malignancy
Moon and cols., 2008 (4)	1/52 (2%)
Bonavita and cols., 2009 (5)	0/210
Kim and cols., 2010 (6)	0/117
Virmani and Hammond, 2011 (7)	0/66
Present series	1/180 (0.5%)
All	2/625 (0.3%)

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