Nodular Thyroid Disease: Who Do We Biopsy?

This department covers selected points from the 2007 Endocrine Update:
A CME Day from the Division of Endocrinology and Metabolism at McMaster University and the University of Western Ontario.
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Thyroid nodules are common and are frequently benign. Current data suggests that the prevalence of palpable thyroid nodules is about 3% to 7% in North America; the prevalence can be up to 10 times higher based on autopsy, surgery, or ultrasonography data. About 5% of all thyroid nodules can be cancerous, irrespective of their size; however, due to the high prevalence of nodular thyroid disease, it is not feasible to complete a work-up for all thyroid nodules.

Management

Guidelines from the American Thyroid Association recommend that thyroid sonography be performed in all patients with one or more suspected thyroid nodules. Fine needle aspiration (FNA) is the procedure of choice in the evaluation of thyroid nodules. In the presence of two or more thyroid nodules > 1 cm to 1.5 cm, those with a suspicious sonographic appearance (*e.g.*, microcalcifications, hypoechogenicity, intranodular hypervascularity) should be aspirated preferentially. Easily palpable benign nodules do not require sonographic monitoring, but patients should be followed up at six to 18 month intervals. All other benign thyroid nodules should be followed-up with serial ultrasound examinations at six to 18 months after initial FNA. If nodule size remains stable, then the interval before the next follow-up examination or ultrasound may be extended. Routine suppression therapy of benign thyroid nodules is not recommended.

When intervention for benign thyroid disease is deemed necessary due to cosmesis, compression, or patient preference, then surgical management with total thyroidectomy by an experienced surgeon can be considered for bilateral disease, or hemithyroidectomy for unilateral euthyroid disease. L-thyroxine can be considered for management of nodular disease in hypothyroid and euthyroid patients. Iodine-131 therapy is an option for the management of nodular disease in hyperthyroid and euthyroid patients. Laser thermal ablation and percutaneous ethanol ablation may also be considered for solid and cystic nodules, respectively.If non-surgical interventions yield unsatisfactory results, then the option of surgery can be revisited. Dx

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