Incidental Nodule Evaluation

Thyroid nodules can be found on physical examination in up to 5% of adults. Prevalence is increased in iodine deficient areas, among women, and in the elderly. Most palpable nodules are greater than 1 cm in diameter, and several studies have found that approximately 70% of incidental thyroid nodules are benign, while up to 10% are malignant and 20% are non-diagnostic. An appropriate approach is therefore essential in the evaluation of incidental thyroid nodules.

Upon identifying a solitary thyroid nodule on physical exam, a TSH level should be sent in order to determine if the nodule is suppressing the hypothalamic-pituitary-thyroid axis. If the TSH is low, a radionucleotide scan is indicated to characterize the nodule as “hot” or “cold.” If the nodule is “hot,” the patient can be reassured that it is almost certainly benign. FNA is unnecessary, and management consists of ablation, medical management, or observation.

A normal TSH or a cold nodule on radionucleotide scan are indications for FNA of the nodule. If the nodule is smaller than 1 cm, ultrasound may be used to help guide the needle into the lesion.

Pathology results from FNA of thyroid nodules return with one of several potential diagnoses. Inadequate specimens should be repeated. Benign findings include macrofollicular lesions and colloid adenomatous cysts are non-malignant and are either aspirated or observed. If a follicular neoplasm is found, surgery is indicated, since benign and malignant growths so closely resemble each other. Indeterminate or suspicious findings on FNA are often treated with surgery.

There are some counter-indications to FNA. As mentioned above, FNA cannot prove malignancy, especially in follicular neoplasms. Additionally, FNA should not be attempted on patients with a history of ionizing radiation exposure or a history of familial thyroid cancer as these patients are likely to have multifocal tumors. In these patients, ultrasonography can be a useful tool; however it would not be used to assess for nodules in a euthyroid patient.

References:
