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THE POSSIBILITES OF PREOPERATIVE DIAGNOSIS OF THYROID MALIGNANCY

Abstract

Despite the low incidence and favorable prognosis, thyroid carcinoma presents important diagnostic challenge. History and physical findings is neither sensitive nor specific in detecting underlying malignancy. Prior head and neck irradiation as well as a family history of thyroid cancer could be predisposing to thyroid malignancy.

Thyroid function tests are rarely of value and only TSH determination should be requested; if the thyrotropin level is elevated, a serum antithyroperoxidase level may be obtained to confirm Hashimoto thyroiditis, although a neoplasm may coexist as an independent lesion.

If there is a family history of medullary thyroid cancer (MTC) or MEN II, a basal serum calcitonin level should be obtained.

Ultrasound scan is rarely diagnostic but may be of value in aiding fine needle aspiration and evaluation of coexisting non-dominant nodules and adjacent adenopathy. MRI and CT were useful when limits of the goitre cannot be determined, or for fixed tumours, or patients with haemoptysis. Chest X-ray – useful in assessing secondary disease. Flow-volume loop perform if upper airways obstruction is suspected. Isotope studies are usually non-diagnostic for the thyroid carcinoma; they are of value in determining hyperfunctioning nature of thyroid node. Radionuclide imaging are best reserved for special circumstances in the preoperative, peri od and also for postoperative assessment and treatment. Large needle biopsy – should not be carried out for differentiated thyroid cancer but is sometimes necessary for suspected lymphoma.

Fine Needle Aspiration (FNA) is the procedure of choice in patients presenting with thyroid enlargement, with the exception of patients with suppressed thyrotropin levels. The sensitivity of FNA is 90-95%, but the specificity is lower, 60-80%, as FNA cannot distinguish between benign and malignant follicular lesions. The most promising markers to improve the diagnostic accuracy of FNA to date are TPO and galectin-3. In the process of dedifferentiation, TPO appears to be the first protein with diminished expression. The detection of a PPARgamma/PAX8 rearrangement in great number of follicular carcinoma's and not in papillary carcinoma and follicular adenomas, suggested that this rearrangement could be a used as a diagnostic tool.

Key words: thyroid cancer, fine needle aspiration, tumor marker.