Isotope scanning

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The uptake by the thyroid of a low dose of either radiolabelled 123 99m I) or the cheaper technetium (Tc) will demonstrate iodine (the distribution of activity in the whole gland. Routine isotope scanning is unnecessary and inappropriate for distinguishing benign from malignant lesions because the majority (80%) of ‘cold’ swellings are benign and some (5%) functioning or ‘warm’ swellings will be malignant. Its principal value is in the toxic patient with a nodule or nodularity of the thyroid. Local isation of overactivity in the gland will di ff erentiate between a toxic nodule with suppression of the remainder of the gland and toxic multinodular goitre with several areas of increased Figure 55.8 uptake with important implications for therapy (Whole-body scanning is used to demonstrate metastases. However, the patient must have all normally functioning y either surgery or radioiodine before thyroid tissue ablated b) the scan is performed because metastatic thyroid cancer tissue - cannot compete with normal thyroid tissue in the uptake of iodine. - -).

(d) Figure 55.7 (a) Scout /f_i lm showing retrosternal goitre. (b) Axial com

puted tomography (CT) section showing goitre extending to below the aortic arch with tracheal compression. (c) Coronal CT section showing goitre extending to the tracheal bifurcation. (d) Sagittal CT section showing goitre /f_i lling the posterior mediastinum. Figure 55.8 Technetium thyroid scan showing the appearance of a 1-cm ‘toxic’ adenoma in the right thyroid lobe with suppression of uptake in the left lobe. The intense uptake gives a false impression of the size of the swelling.

FNAC is the investigation of choice in discrete thyroid swell ings. FNAC has excellent patient compliance, is simple and quick to perform in the outpatient department and is readily repeated. This technique, developed in Scandinavia 40 years ago, is now r outine throughout the world. FNAC results should be reported using standard terminology (Table 55.2). Ultra sound guidance allows more accurate sampling and reduces the rate of unsatisfactory aspirates.

TABLE 55.2 Classi /f_i cation of /f_i ne-needle aspiration cytology reports. Thy1 Non-diagnostic Thy1c Non-diagnostic cystic Thy2 Non-neoplastic Thy3 Follicular Thy4 Suspicious of malignancy Thy5 Malignant

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