

ACCESSORY THYROID IN THE ANTERIOR MEDIASTINUM: CASE REPORT

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A case of accessory thyroid in the anterior mediastinum, physically separated from the thyroid gland, is reported. The mediastinal thyroid was incidentally discovered during the preoperative evaluation of a patient with breast carcinoma. The extreme rarity of the case is outlined.

Embryologically the human thyroid originates from an anlage of the pharyngeal epithelium in the region of the foramen cecum of the tongue. The anlage migrates in the neck, anterior to the first tracheal ring. Thyroid tissue may arrest at any level during this progression, giving rise to a lingual, suprahyoid, or infrahyoid thyroid gland. Infrequently the entire gland or part of it may descend into the chest (1). Usually, these intrathoracic remnants are small in size and their function is irrelevant.

CASE REPORT

A 59-year-old woman was admitted with a lump in the right breast. At the inferior pole of the right lobe of the thyroid a 1-cm soft nodule was palpated. Mammography and thermography confirmed a malignant lesion of the right breast. Bone survey and brain and liver scans were negative for metastatic lesions. Chest radiography (Fig. 1) revealed a round regular 8-cm opacity in the anterior mediastinum. Fluoroscopy and serial tomograms gave no further information about the mass. Thyroid scan with ^{131}I showed an enlarged left lobe, a small cold nodule on the right lobe, and a concentration of radioactivity in the anterior mediastinum (Fig. 2) physically separated from the normal gland. The scintigraphic mass correlated with that seen on the roentgenograph. The ^{131}I uptake and serum T_3 and T_4 were normal. Needle biopsy of the cold nodule on the right lobe of the thyroid showed colloid-cystic degeneration. Mediastinoscopy revealed a round well-capsulated soft mass in the anterior mediastinum in close relationship with the great vessels; it had no anatomic

continuity with structures in the neck. Biopsy of the mass showed normal thyroid tissue.

DISCUSSION

Mass lesions of the mediastinum discovered by a routine chest radiograph present a serious diagnostic

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FIG. 1. Radiograph of chest shows round opacity in anterior mediastinum extending to left side.



FIG. 2. Iodine-131 scan shows accumulation in mass shown by chest radiograph.

problem. A variety of malignant and benign lesions may originate from structures in the chest or neck, often with few or no symptoms. Metastatic neoplasms are not unusual. Intrathoracic goiter is a common lesion that is usually located in the superior mediastinum in continuity with the thyroid. For this reason a ^{131}I scan is frequently performed on masses located high in the superior mediastinum. On the other hand, imaging for thyroid tissue is not undertaken when a mass is found low in the anterior mediastinum. In the presence of a normally functioning thyroid gland, ^{131}I uptake by other thyroid tissue is frequently inhibited. The same holds for a functioning metastatic lesion from thyroid carcinoma (2) until the thyroid gland and the primary neoplasia have been removed. In our case the mediastinal thyroid tissue was able to concentrate the radionuclide in the same way as the "normal" thyroid gland. Because of the cold nodule in the right lobe we originally postulated a carcinoma of the thyroid with

a functioning metastasis but we also considered the possibility of accessory thyroid tissue of unusual size. Similar cases are rare but have been reported in the literature (3). Needle biopsy of the cold nodule excluded the first hypothesis and mediastinoscopy and biopsy of the intrathoracic mass confirmed the second. No further treatment was considered necessary at this time.

REFERENCES

1. SLOAN LW, FEIND CR: Clinical aspects of anomalous development. In *The Thyroid*, Werner SC, Ingbar SH, eds, 3rd ed, New York, Harper & Row, 1971, pp 317-333
2. SHAHANI SN, SHARMA M, GANATRA RD, et al: Functioning metastasis from thyroid cancer. *Arch Surg* 95: 689-692, 1967
3. SANGUINETI M: L'impiego del radioiodio nella diagnosi dei tumori maligni. In *Atti del Convegno sui Traccianti Radioattivi nella Diagnostica Oncologica*, Naples, Fondazione Senatore Pascale, 1973, pp 359-387

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