

CASE REPORTS

Anterior Neck Abscess Masquerading as Acute Suppurative Thyroiditis

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Two patients with extrathyroidal anterior neck abscesses are discussed. Normal thyroid scans ruled out acute, suppurative thyroiditis.

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The diagnosis of acute, suppurative thyroiditis is usually made on clinical grounds and confirmed by needle aspiration or surgical drainage. The thyroid scan is abnormal, with decreased uptake in the involved areas of the gland (1-10). Early in the course of acute suppurative thyroiditis, the differential diagnosis may be difficult, and includes nonsuppurative, painful thyroiditis or acute hemorrhage into a thyroid nodule or cyst. However, in the presence of high fever, leukocytosis, and an exquisitely tender, tense, erythematous swelling in the area of the thyroid, the diagnosis of acute suppurative thyroiditis would be most likely. The present report describes two patients with a midline, tender, anterior neck mass. Normal thyroid scans ruled out an intrathyroid inflammatory process.

CASE REPORTS

Case 1. Three weeks prior to admission a 47-year-old man was admitted to another hospital with fever, hoarseness, and painful swelling in the thyroid area. He had been in good health until he developed a mild upper respiratory infection. Hoarseness developed immediately following a sneezing spell, and next morning he noted slight swelling and tenderness low in the front of the neck. These increased during the next 2 wk, and a fever developed, reaching 39.4°C shortly before admission to our clinic. The neck was swollen, red, very painful, and sensitive to movement, and there was severe occipital headache. There was no respiratory distress, and neither history nor current signs of metabolic abnormality.

On physical examination the patient was hoarse and in moderate distress. Temperature was 39.4°C and pulse 100/min. There was a diffuse, tense, nonfluctuant, erythematous, warm, and exquisitely tender swelling over the thyroid area (Fig. 1A). Indirect laryn-

gосcopy revealed swelling of the left false vocal cord extending into the base of the epiglottis.

Laboratory findings included WBC of 12,900/mm³ with a shift to the left, and a sedimentation rate of 120 mm/hr. Serum T₄, T₃ resin uptake, and TSH were normal. Antithyroglobulin and antimicrosomal antibodies were undetectable. Radiographs of the neck revealed soft-tissue swelling without airway compression.

With a diagnosis of acute, suppurative thyroiditis, i.v. oxacillin and chloramphenicol were started. The fever subsided slightly, but otherwise there was no change. A thyroid scan and radioiodine uptake (15% at 24 hr) were normal on the third hospital day. Ultrasound examination of the neck (Fig. 1B) indicated a cystic area anterior to the thyroid.

On the fourth hospital day definite fluctuance was found, and at surgery a 100-cc abscess was drained. It lay deep to the strap muscles but did not involve the thyroid. Pus culture was uninformative. Fever subsided, voice improved, and several weeks later the wound had healed. At 8 mo the patient is well.

Case 2. A 26-year-old white woman was referred to the endocrine clinic with the diagnosis of acute nonsuppurative thyroiditis.



FIG. 1. (A) Patient 1 on day after admission. (B) Ultrasound examination of neck, revealing cystic area anterior to thyroid. Arrow indicates right lobe of thyroid.

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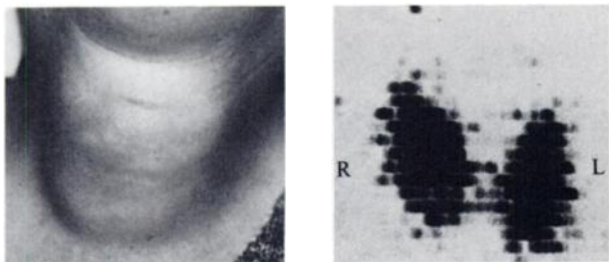


FIG. 2. (A) Patient 2 on day of examination. (B) Normal thyroid scan.

She was in good health until 3 wk earlier, when she developed a sore throat and nonspecific upper respiratory infection. Approximately 2 wk later, she developed severe pain and swelling in the area of the thyroid, without fever. She was treated with 60 mg prednisone daily for 7 days, but the pain and swelling intensified and the overlying skin became erythematous and warm. She remained afebrile. There was neither respiratory distress nor symptoms of thyroid dysfunction. Past history was negative for thyroid disease.

On physical examination, the patient was hoarse and in moderate distress. Temperature was 37°C and pulse 110/min. There was a large, diffuse, very tender, tense, nonfluctuant, erythematous, warm swelling over the thyroid area (Fig. 2A), without lymphadenopathy. The rest of the physical examination was unremarkable. Laboratory findings included WBC of 13,000/mm³ with shift to the left, and a sedimentation rate of 50 mm/hr. Serum T₄, T₃ resin uptake, and free thyroxine index were normal. Prednisone was discontinued. Iodine-131 uptake (13% at 24 hr) and thyroid scan (Fig. 2) were normal. The diagnosis of an extrathyroidal suppurative process was made and penicillin was administered. The patient remained afebrile but fluctuation developed. At surgery, the abscess was drained of 105 ml of purulent, foul-smelling material. Culture grew *Staphylococcus aureus* and anaerobic streptococci, both sensitive to penicillin. Postoperative recovery was rapid.

DISCUSSION

These two patients presented with many of the signs and symptoms of acute, suppurative thyroiditis as described in the literature (11-13). In this disorder, however, the thyroid scan has always been abnormal (1-10). Most often the suppurative process is local and the rest of the scan remains normal (1-6,8); typically, therefore, the radioiodine uptake is normal unless suppuration is extensive enough to depress it (9,10,14). Nonsuppurative, acute thyroiditis usually involves the entire gland, leading to low uptake (15,16). However, this disorder may occasionally involve a portion of the thyroid resulting in a localized defect on radioiodine scans (17). The normal scans of our two patients essentially ruled out both suppurative and nonsuppurative acute thyroiditis.

In contrast to the acute phase of nonsuppurative thyroiditis, during which a patient is clinically hyperthyroid with elevated serum T₄ and T₃ concentrations (18-20), suppurative thyroiditis rarely results in these findings (1-10,14). Thus, our patients' laboratory findings were compatible with acute suppuration, either in the thyroid or in the nearby neck, and the normal scans made the former unlikely. Finally, ultrasound examination of the neck

in the first patient strongly suggested a cystic process anterior to the thyroid gland.

Accordingly, when a patient presents with a tender mass in the thyroid region, we strongly recommend radioiodine uptake and scan, together with ultrasonic examination, in order to distinguish an intrathyroid from an extrathyroid process.

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