ABSTRACT

A 67-year-old male with a history of bipolar disorder and presumed lithium-induced hypothyroidism presented to his primary care physician after multiple syncopal episodes.

His review of systems was notable for fatigue and weight loss, dysphagia, intermittent diarrhea, and dry, pruritic skin.

He denied prior ionizing radiation, tobacco use, alcohol use, or a family history of thyroid disease.

His syncope work up was normal except for an elevated TSH and a carotid duplex demonstrating a 1.3 x 1 x 0.9 cm left-thyroid nodule.

On examination, he had a palpable left thyroid nodule without cervical adenopathy. His flexible fiberoptic laryngoscopic examination was normal.

A fine needle aspirate biopsy (FNAB) of the nodule demonstrated atypical cellular features with epithelioid histiocytes in loose syncytial aggregates and a background of lymphocytes. (Figure 1)

The findings were concerning for possible papillary thyroid carcinoma.

Biopsy and lab results as well as the different management options were reviewed with the patient, and he chose to undergo a total thyroidectomy. The patient’s perioperative course was uncomplicated.

The pathology returned with multiple bilateral thyroid nodules up to 1 centimeter. Findings demonstrated replacement of thyroid tissue with chronic inflammatory cells and a scattering of multiple well-formed interstitial non-caseating granulomas composed of epithelioid histiocytes, a mixed inflammatory infiltrate, and multinucleated giant cells. (Figure 2)

A lymph node identified with the specimen demonstrated the same findings. (Figures 3 and 4) There was no malignancy identified.

His final diagnosis was sarcoidosis of the thyroid.

LITERATURE REVIEW

Sarcoidosis is a disease of unknown etiology characterized by a combination of clinical and radiologic findings and histologic evidence of non-caseating granulomas. Most commonly found in the lungs, lymph nodes, eyes, and skin, sarcoidosis is rarely found in the thyroid gland.1,2 The disease most commonly presents in females in their third decade.1,2 Sarcoidosis is considered a disease of activated T lymphocytes, and manifestation ranges from transient acute attacks to chronic illness.2 When the disease is active, lymphocytes accumulate and form granulomas in conjunction with inflammatory and other immune cells. Histologically the granulomas consist of epithelioid histiocytes surrounded by lymphocytes. As the disease becomes chronic, the central epithelioid and giant cell component predominates and the number of surrounding lymphocytes decreases. Granulomas that do not resolve often become fibrotic at the margins due to collagen deposition.3

Sarcoidosis within the thyroid gland was first described in 1938 and based upon autopsy studies it is reported to occur within the thyroid gland in up to 4% of patients with sarcoidosis.1,3,4,7 The diagnosis of sarcoidosis in the thyroid gland is essentially one of exclusion. When non-caseating granulomas are discovered pathologically, other granulomatous disorders must be considered. Fungal or mycobacterial infections, subacute or Hashimoto’s thyroiditis, and reactive changes to carcinoma or foreign bodies can all resemble the pathology of sarcoidosis. Work-up should include PAS and Ziehl-Neelsen stains, and laboratory tests must include anti-thyroid antibodies and thyroid function tests.11 When granulomas are identified in the thyroid gland alone, particularly in association with a malignancy, the condition is termed sarcoid reaction. Once the pathology is seen in the surrounding lymph nodes or adjacent tissue, the diagnosis of sarcoidosis is favored over other granulomatous diseases or conditions.4,6,8

The finding of sarcoidosis in the thyroid gland is reported in association with many pathologic entities including solitary nodules, non-toxic multi-nodular goiter, autoimmune conditions such as Graves’ disease and Hashimoto thyroiditis, Hurthle cell hyperplasia and papillary thyroid cancer.5,9,8,10,11 Rarely, thyroid findings are the only anatomic location of sarcoidosis in the body.2,4 Despite associated pathology, patients vary metabolically from hypo- to hyperthyroid, to euthyroid.11

Though a rare finding, the diagnosis of sarcoidosis of the thyroid gland is a pathologic consideration in selective otolaryngologic patients.

REFERENCES


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