Thyrolipomatosis: A Rare Fat Containing Lesion diffusely Infiltrating Throughout the Thyroid Gland

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A 73 yr old male presented with rapidly enlarging midline neck swelling of 2 months duration. Respiratory discomfort during breathing and hoarseness of voice occurred since few days. There was no history of palpitation, tremor or sweating. A physical examination revealed signs of pallor without icterus.

Computed tomography (CT) of the chest and neck revealed a mass with mass effect on trachea (Figures 1, 2). No enlarged lymph nodes could be noted. Magnetic Resonance (MR) images of the neck confirmed the fatty nature of the mass. Fast spin-echo T1-weighted MR image showed the lesion to be isointense with subcutaneous fat. These imaging findings signalled towards diffuse presence of mature adipose tissue inside thyroid gland which defines thyrolipomatosis. Also, skin biopsy was negative for amyloid deposition. A near total thyroidectomy was performed and histopathological studies confirmed thyrolipomatosis in the post-operative specimen.

Normally, adipose tissue is observed in the parathyroid, salivary glands, breast and breasts, but it is rarely observed in the thyroid gland. Thyrolipomas (adenolipomas) are described as well-capsulated benign nodules containing fat and thyroid tissue. Thyrolipomatosis is characterized by diffuse infiltration of adipose tissue in the thyroid gland. Differential diagnosis of fat containing thyroid lesions include lymphocytic thyroiditis, parathyroid lipoma, heterotopic adipocytic nests, amyloid goiter, thyrolipoma, liposarcoma and encapsulated papillary carcinoma.

Sonography is the mainstay for imaging the thyroid gland and is usually sufficient to make a diagnosis when combined with laboratory findings and fine needle aspiration cytology. Fatty tissue infiltration or fatty masses may be iso-echoic and cannot be differentiated from normal thyroid gland on ultrasonograms. For the current patient, sonography was not diagnostic, and the diagnosis of thyrolipomatosis was based on the CT and MR imaging appearances, and exclusion of other diseases.

References


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