



Images In Medicine

Thyroid Lymphoma

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A 54 YEAR OLD MAN WITH A RECENT HISTORY OF THYROIDITIS presented to the Emergency Department with subacute onset of shortness of breath, which suddenly worsened on the day of admission, accompanied by fever and a “wet” feeling in the lungs. The patient is a nonsmoker with a remote history of tonsillectomy. His symptoms transiently improved in the ED with conservative treatment, and then acutely worsened, with marked shortness of breath and an episode of suspected aspiration. The patient was felt able to protect his airway at this point, and therefore underwent imaging of the neck for further evaluation.

A lateral radiograph of the neck demonstrated marked soft tissue swelling and possible mass in the infrahyoid region, with narrowing of the trachea. (Figure 1) CT was performed for further evaluation. (Figure 2) Contrast enhanced CT of the neck demonstrated marked enlargement of the thyroid gland, right greater than left. There were multiple areas of hypodensity suspicious for abscess and/or necrosis within the gland. There was abnormal presence of air in the retropharyngeal space. There was mass effect on the trachea, decreasing its diameter to 6 mm.

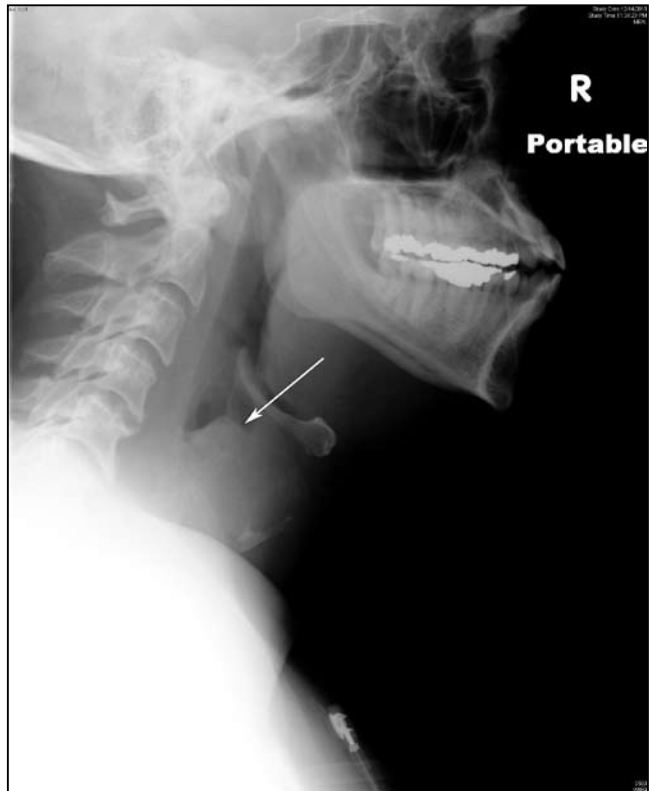


Figure 1. A lateral radiograph of the neck demonstrates marked soft tissue swelling and possible mass in the infrahyoid region (arrow), with narrowing of the trachea.

The patient was taken to the operating room for debridement of the suspected neck abscess and placement of a surgical airway. Specimens sent to Pathology demonstrated necrosis, areas of fibrosis, reactive cells, and no evidence of malignancy.

The patient spent approximately one week in the intensive care unit, after which repeated episodes of aspiration led to concern for undetected abscess, esophageal perforation, and/or

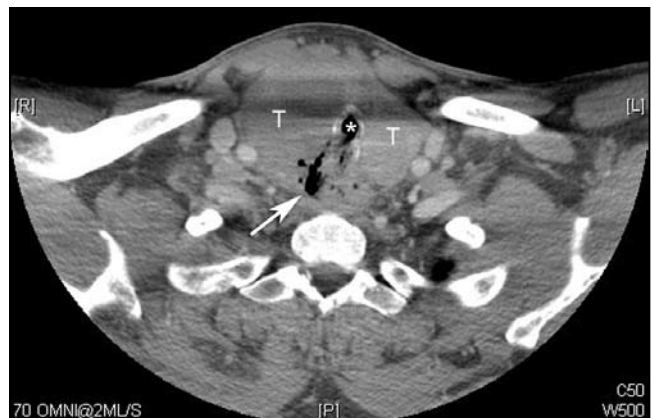


Figure 2. Contrast enhanced CT of the neck demonstrates marked enlargement of the thyroid gland, right side larger than left (T). Internal areas of hypodensity with retropharyngeal space gas are suspicious for abscess and/or necrosis (arrow). There is associated narrowing of the trachea (*).



Figure 3. A sagittally reconstructed CT following a barium swallow demonstrates abnormal fistulous connection from the vallecula to the upper trachea. An additional tract was seen between airway and the cervical esophagus (arrow).

tracheal rupture. The patient was again taken to the operating room for bronchoscopy, sternocleidomastoid flap for repair of the trachea, primary repair of the cervical esophagus, and tracheostomy replacement. Specimens at this time demonstrated extranodal marginal zone lymphoma, consistent with B-cell **mucosa associated lymphoid tissue (MALT)**, with large areas of necrosis and abscess formation, numerous histiocytes and fibrosis. Transformation to diffuse large B-cell lymphoma could not be excluded. Reactive lymph nodes and normal parathyroid tissue were found in the adjacent tissues. Repeat imaging was acquired postoperatively. (Figure 3) A sagittally reconstructed CT following a barium swallow demonstrates abnormal fistulous connection from the vallecula to the upper trachea. An additional tract was seen between the airway and cervical esophagus (green arrow).

Tracheoesophageal invasion and rupture is a rare complication that should be considered when a patient with neck neoplasm develops acute respiratory and gastrointestinal symptoms. Approximately 40% of non-Hodgkin lymphomas occur in extranodal sites, with the majority representing diffuse large B cell lymphomas. Of the small B-cell non-Hodgkin lymphomas, the majority are extranodal marginal zone B-cell lymphomas of mucosa associated lymphoid tissue (MALT lymphomas). Half of MALT lymphomas are located in the GI tract. Common sites of involvement include lung, salivary glands, ocular adnexa, and skin. The thyroid is an uncommon site, involved in 4% of cases. Most cases occur in a middle-aged population with a mean age of 61, and a slight female predominance. Most arise in a background of Hashimoto's thyroiditis, and patients typically present with a rapidly enlarging thyroid mass and sequelae of mass effect on adjacent structures, symptoms which may mimic those of anaplastic thyroid carcinoma. Treatment depends on the histological subtype and stage of the disease and includes radiotherapy and chemotherapy. The prognosis is usually favorable with proper

treatment, as compared with that of anaplastic carcinoma. Overlapping cytologic features of thyroid lymphoma and anaplastic thyroid carcinoma make immunocytochemistry an important part of pathologic differentiation of these two entities.

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Disclosure of Financial Interests

The authors and/or their spouses/significant others have no financial interests to disclose.

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