Intrathoracic Mass Masquerading as a Retrosternal Goiter!

Veladi Sasi Mouli[1], Manjunath Shreyamsa[2], Loreno Enny[3], Surabhi Garg[4], Kul Ranjan Singh[5], Pooja Ramakant[6], Anand Mishra[7]

Abstract

Thyroid swellings with retrosternal extension are usually diagnosed by the history, clinical examination, and imaging. An intrathoracic mass extending into the neck can easily be mistaken for a thyroid swelling with retrosternal extension. A high degree of suspicion is necessary to identify such swellings that are confusing in their presentation. Here we report a case of mediastinal mass masquerading as a goitre with retrosternal extension along with spontaneous chylothorax, and was diagnosed to have non-Hodgkin's lymphoma (NHL). She was administered chemotherapy after the diagnosis.

Keywords: Chylothorax, Goiter, Mediastinal, Non-Hodgkin's Lymphoma.

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Case Description

A 35-year-old lady, without any significant past history, is presented with a painless progressive swelling in the anterior aspect of the neck for four months, and a nonexertional dyspnoea for 3 months. She had no history suggestive of hyperthyroidism or hypothyroidism. On examination, she did not have any lymphadenopathy. The neck revealed a 4 × 4 cm hard swelling in the anterior aspect of the lower neck, and lower border of the mass was not palpable, with prominent upper chest wall veins (Fig. 1A), without any features of the superior vena cava (SVC) syndrome. Left side breath sounds

[1–7]Department of Endocrine and Breast Surgery, King George's Medical University, Lucknow, Uttar Pradesh, India

Corresponding Author: V Sasi Mouli, Department of Endocrine Surgery, King Georges Medical University, Lucknow, Uttar Pradesh, India, Phone: +91 8697453710, e-mail: sasimouli.116@gmail.com

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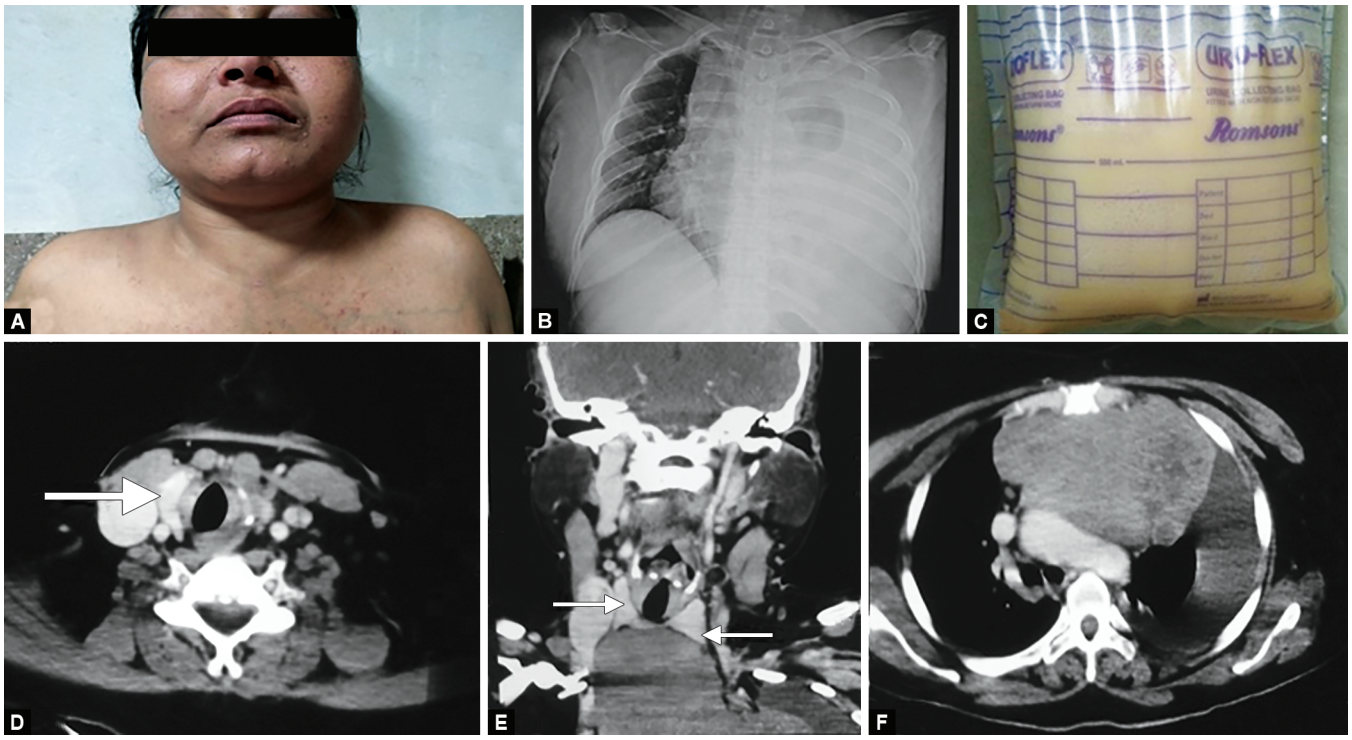

Figs 1A to F: (A) A patient with dialated chest veins; (B) Massive left pleural effusion; (C) Chyle; (D) Normal lobes of thyroid on the axial section of a CT scan (arrow); (E) Normal right lobe of thyroid on the coronal section of a CT scan (arrows), which is separated from the mediastinal mass just below; (F) Anterior mediastinal mass

were reduced. Clinically it mimicked a retrosternal goiter with a suspected malignancy.

Serum lactate dehydrogenase (LDH) was 1269 U/L (240–480 U/L). A chest roentgenogram revealed a left massive pleural effusion (Fig. 1B). Therapeutic thoracocentesis revealed a milky fluid, chyle (Fig. 1C). On analysis, the pleural fluid was exudative, with pleural fluid protein 3.72 g/dL, LDH 1669.3 U/L, and triglycerides 256 mg/dL. A computed tomography (CT) scan of the neck and thorax (Fig. 1F) revealed a heterogeneously enhancing soft tissue lesion of 11.6 × 13 × 8.6 cm in anterior mediastinum with extension to neck superiorly indenting isthmus and both lobes of thyroid with obliterated fascial planes. Lesion abutting superior vena cava >180 degrees, pulmonary trunk up to 180 degrees, and >90 degrees abutment with bracheocephalic trunk, bilateral internal jugular vein, and bilateral common carotid artery. The interface between the pericardium and pleura is ill-defined. On a closer look, the thyroid was seen to be separate from this large infiltrative mediastinal mass (Figs 1D and E).

An image-guided core needle biopsy of the mass is diagnosed as non-Hodgkin's lymphoma (NHL). Staging was Ann Arbor stage I and Lugano classification—stage I X (bulky disease). As patient had to undergo repeated aspirations for chylothorax, patient was subjected to intercostal tube drainage which was managed conservatively, and then she was started on CHOP (cyclophosphamide, doxorubicin, vincristine, and prednisolone) regimen.

Discussion

Diffuse large B-cell lymphoma accounts for around 30–58% of NHL.[1,2] They are more common among elderly people and men. The clinical features depends on the site of involvement, and pressure effects of the tumor on surrounding structures, and the presence or absence of B-symptoms such as fever, night sweats, and weight loss. Tissue biopsy is necessary for the diagnosis, and staging should be done after a complete systemic workup, including imaging of the chest, abdomen, bone marrow aspirate, and trephine biopsy. Immuno-phenotyping either by immunohistochemistry (IHC) or flow cytometry aids the lineage and sub-type of NHL. Nontraumatic chylothorax is a rare presentation. The etiology of the same includes malignancy, sarcoidosis, retrosternal goiter, and amyloidosis. Lymphoma accounts for 70% of nontraumatic chylothorax.[3] Diagnosis is done by a clinical and pleural fluid analysis, which shows a triglycerides' level of >110 mg/dL.[4] Management depends on the output: <1000 mL/day can be managed conservatively, whereas patients with output >1000 mL/day usually need surgical intervention.

Conclusion

We need to carefully interpret the CT findings to differentiate thyroid mass from other mediastinal masses pushing/deviating/infiltrating thyroid.

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