

Retrosternal Mass - A Rare Case of Hashimoto's

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Abstract

Retrosternal mass/ goitre is a rare phenomenon in about 2 to 16 percent of retrosternal thyroid cases due to recurrence or growth of a remnant of thyroid tissue missed after total thyroidectomy. Haller in 1749 was the first to describe substernal, retrosternal intrathoracic goitre. Current accepted definition being thyroid gland with more than 50% of its mass located below the thoracic inlet.

A 50-year-old female who had undergone two separate procedures for thyrotoxicosis in the past but came with similar complaints. After thorough evaluation based highly on clinical suspicion, patient was found to have a retrosternal goitre and underwent thyroidectomy through a modified Vrunnelwald incision through Dartvelle approach on the right side of neck.

The mass itself enveloped the brachiocephalic trunk like a bracelet around the wrist and was adherent to the

described structures, which had to be carefully dissected out en mass. Patient further underwent right sided radical neck dissection. Patient withstood the procedure well and her symptoms alleviated post-surgery, which was very rewarding.

Keyword: Retrosternal, thyroidectomy, intrathoracic

Introduction

Retrosternal, substernal, intrathoracic and mediastinal goitre are the various terms used for a missed goitre. 1 Various approach for the thyroidectomy of the same are Mani brio tomy, full sternotomy and thoracotomy. The term "goitre" itself is derived from Latin "timidum gutter" which means "swollen throat" which is defined as a thyroid gland which measures double in size or > 40g. These mostly go unnoticed unless the patient presents with pressure symptoms or of thyrotoxicosis post total thyroidectomy.

Case report

A 50-year-old female who was a known case of thyrotoxicosis, with previous history of right sided lobectomy in 2009, followed by subtotal thyroidectomy in 2014. Patient was found to have colloid adenomatous goitre with features of toxicity. Patient presently came with features of thyroxicosis and after extensive investigations was diagnosed with retrosternal mass lesion with radiotracer uptake.

CT IMAGE Plain and Contrast study

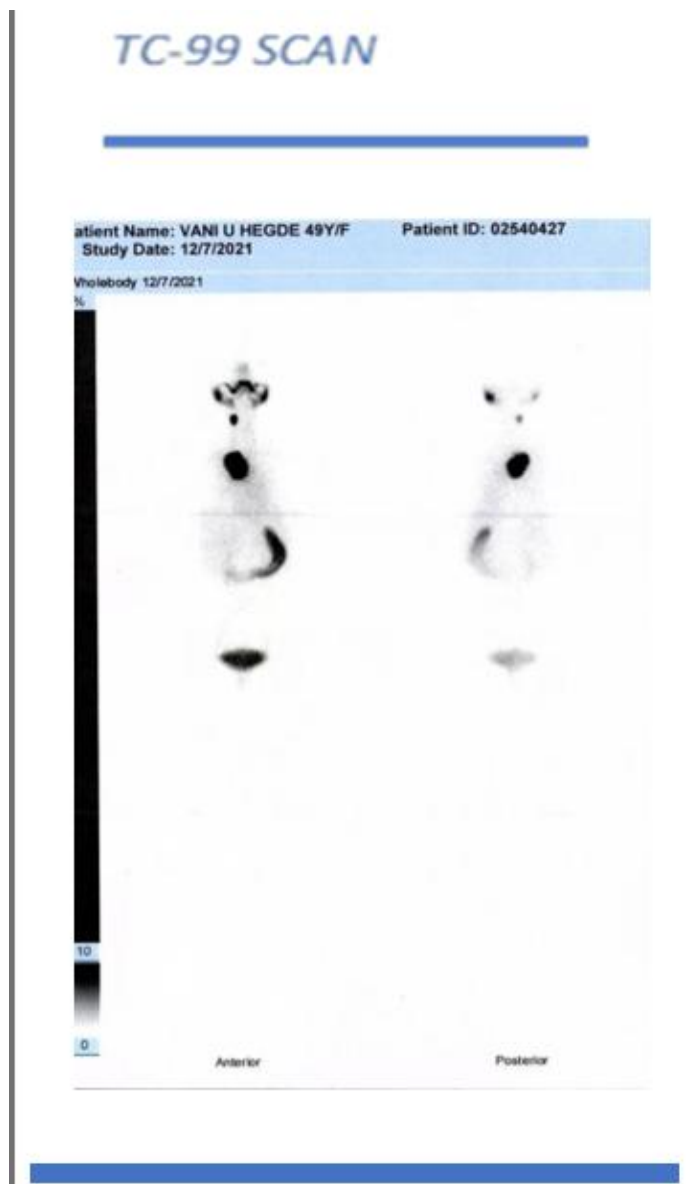


Figure 1:

Ct reports of plain and contrast study of neck

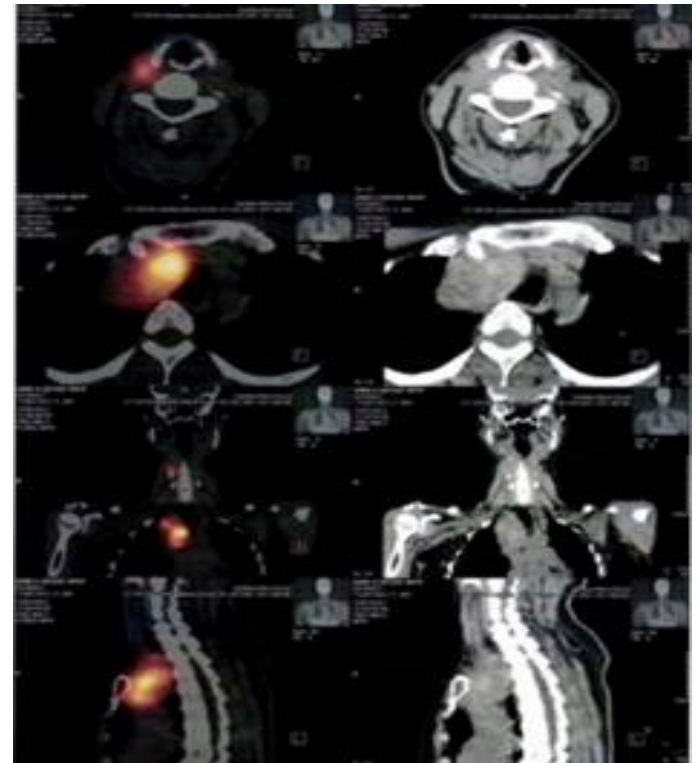


Figure 2:

K/c/o carcinoma thyroid – post op status , with lymph node dissection for cervical metastatic node , Present study of neck shows:

- Enhancing hyperdense soft tissue density area in right level III cervical lymph node station , located posterolateral to right lamina of thyroid cartilage and medial to right common carotid artery- possibility of residual thyroid gland tissue(suggest nuclear scan correlation)
- Few subcentimetric level IA, bilateral IB, II and V cervical lymph nodes
- Features suggestive of **Right Vocal cord paralysis** as described.

Suggested VDS and clinical correlation.

Figure 3:

Tc-99 scan showed

(pertecnate), soft tissue density mass lesion with necrotic areas showing increased radiotracer uptake noted in right paratracheal region measuring 4.2x4.6x6.4cm with enlarged level III lymph node measuring 1x0.9cm with increased radiotracer uptake.

Patient was then planned for excision of the retrosternal mass excision on 17th January 2022 under GA through a partial sternotomy.

Patient underwent excision of the retrosternal mass through a modified Vrunnelwald incision through

Dartvelle approach was taken till the fourth ICS extending from 3 cm below the right angle of mandible over the jugular notch in the midline till the fourth ICS and curved to the right for about 6cm.

After careful dissection, mass measuring 4.2x4.6x6.4 cm and weighing about 60g enveloping the brachiocephalic trunk in a “C shaped” manner was excised with right radical neck dissection and sent for histopathology.

HPE report

showed sections of thyroid follicular parenchyma with variable sized thyroid follicles with luminal colloid and variable degree of hurthelization. The stroma shows lymphoid follicles with germinal Centre formation along with increased stromal lymphoplasmacytic infiltrate. Occasional giant cells seen. Secondary degenerative changes like sclerosis, calcification, cystic change and cholesterol cleft noted. Fragments of unremarkable thymic tissue noted. Histomorphological features compatible with Hashimoto's [lymphocytic] thyroiditis. Right sided neck dissection levels ii-iv: four unremarkable lymph nodes dissected.

Mediastinal: 14 unremarkable lymph nodes dissected.

Figure 4:

Intra op images

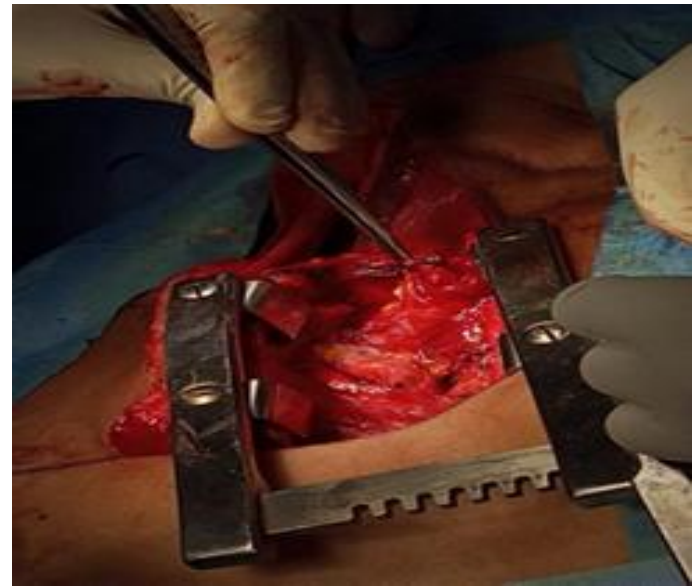
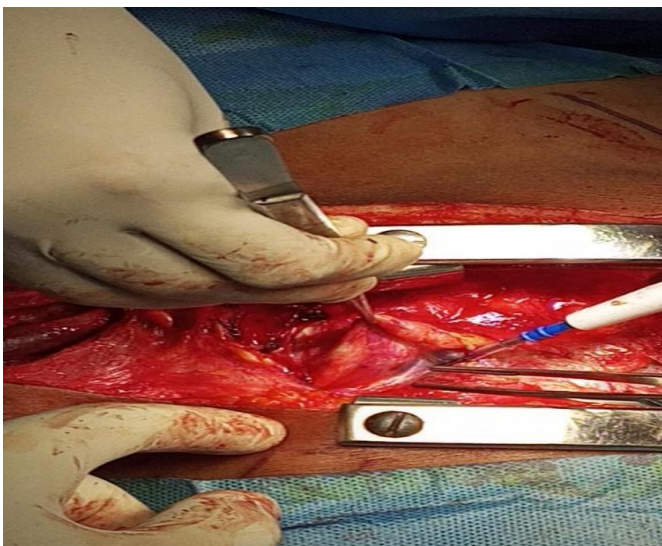


Figure 5:

Post op

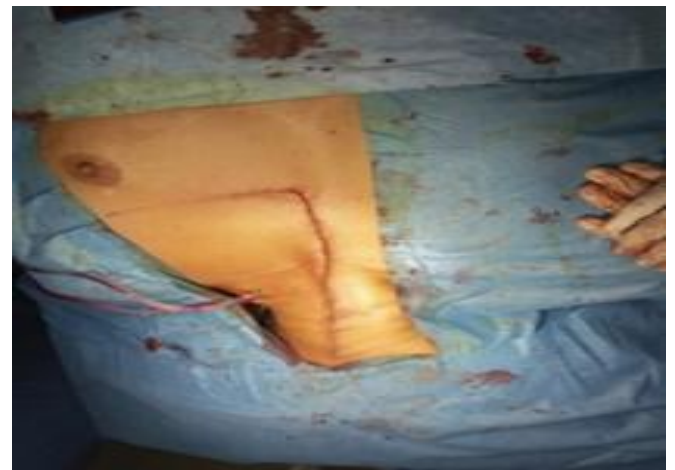


Figure 6:

Specimen

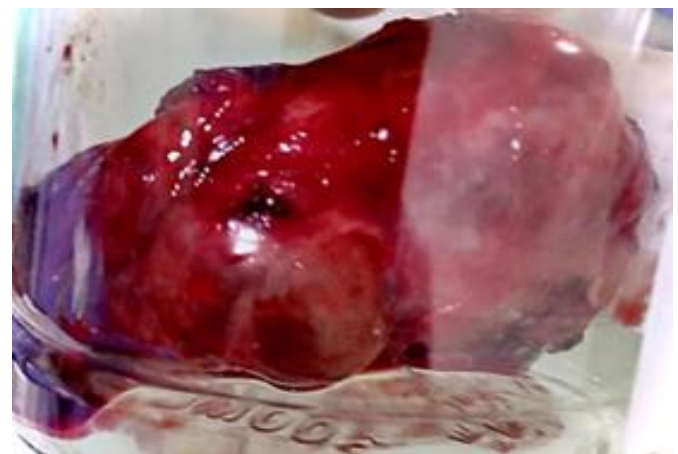


Figure 7:

Conclusion

A large retrosternal mass presents as challenge to any surgeon/ diagnostician/ Otorhino laryngologist/ cardiothoracic surgeon/ oncosurgeon. A multi-disciplinary approach is the safest when dealing with such rare entities as a Hashimoto's presenting retrosternal Ly. A missed thyroid should always be suspected in post operative thyroidectomy patients with toxic features or with obstructive symptoms.

Neck dissection during the surgery makes sure that a papillary carcinoma thyroid is not missed.

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