



RETROSTERNAL ECTOPIC THYROID TISSUE PRESENTING AS PREVASCULAR MEDIASTINAL MASS LESION.

Radio-Diagnosis

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KEYWORDS

INTRODUCTION

Ectopic thyroid accounts for 1% cases of mediastinal tumors and is a infrequent finding(1). It can be found from the floor of the primitive foregut to its normal pre-tracheal position - pathway of normal descent of thyroid gland (2,3). Here we are going to present a case of ectopic thyroid tissue present in the prevascular space.

Case Presentation

A. HISTORY-

A 34 years old female presented to the Department of radiodiagnosis from the ENT department with chief complaints of swelling over the neck anteriorly for 2 years which was gradual in onset and progressive in nature. It was associated with difficulty in breathing during exertion (when climbing stairs or when patient walked about 750 metres). Patient also complained of intermittent odynophagia to solids. There was no associated dysphagia, blurring of vision, proptosis, hoarseness of voice or hemoptysis nor any pain or discharge from the site was noted.

B. EXAMINATION-

On inspection, a swelling was present over the anterior aspect of neck which was globular in shape and about 10 cm in length with well defined edges , non pulsatile , moving with deglutition and having normal overlying skin with no edema or discharge.



Figure 1- Neck mass in patient

Investigations like CBC, RFT, LFT and thyroid profile were within normal limits and Contrast enhanced CT scan of neck was done.

On CECT , bilateral lobes of thyroid gland were bulky and heterogeneous. There was a heterogeneously hyperdense , well defined lobulated mass in the prevascular space of mediastinum (anterior mediastinum) in the retrosternal location with mass showing attenuation similar to thyroid on plain as well as contrast scan. Superiorly, it was closely abutting the inferior pole of thyroid and inferiorly abutting right brachiocephalic artery and arch of aorta with displacement of the trachea towards right.

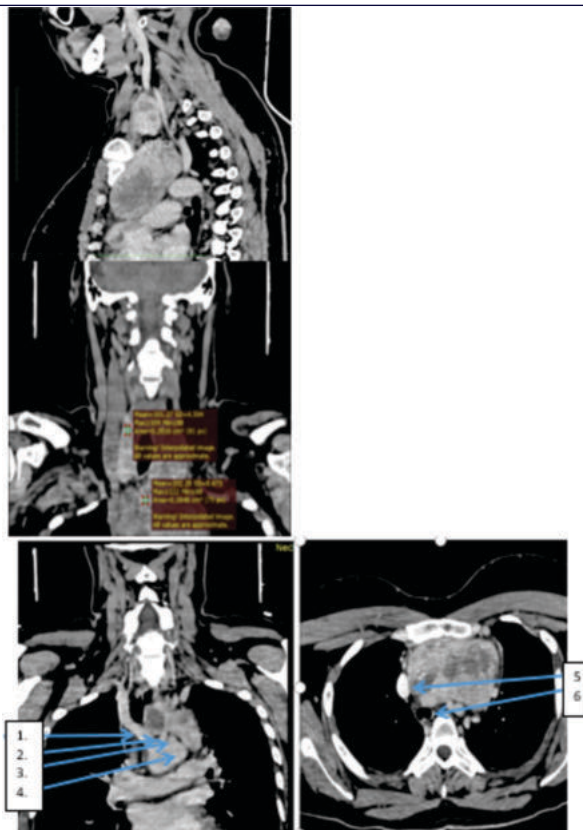


Figure 2-CT IMAGES.

A-Heterogeneously hyperdense , well defined lobulated mass lesion in the prevascular space of mediastinum. B- Showing enhancement equal to the thyroid gland along with bilateral bulky thyroid glands. C- Abutment of major vessels with shifting of trachea towards right. (1-BRACHIOCEPHALIC A., 2-LEFT COMMON CAROTID A. , 3-ARCH OF AORTA, 4- LEFT SUBCLAVIAN A. , 5-SVC AND 6-TRACHEA)

C. OPERATIVE PROCEDURE-

Patient was admitted electively and underwent total thyroidectomy with removal of retrosternal mass.

Transverse cervical incision preserving bilateral recurrent laryngeal nerves and parathyroid glands and thyroid gland was removed.

Subsequently, sternotomy was performed and retrosternal mass, that was not adherent to any major vessels and mediastinal fat was mobilized. Feeding vessel was identified as the branch of internal mammary artery.

Postoperative period was uneventful, patient was kept in ICU for 24

hrs with two drains placed in the cervical as well as mediastinal region and was started on eltroxin.

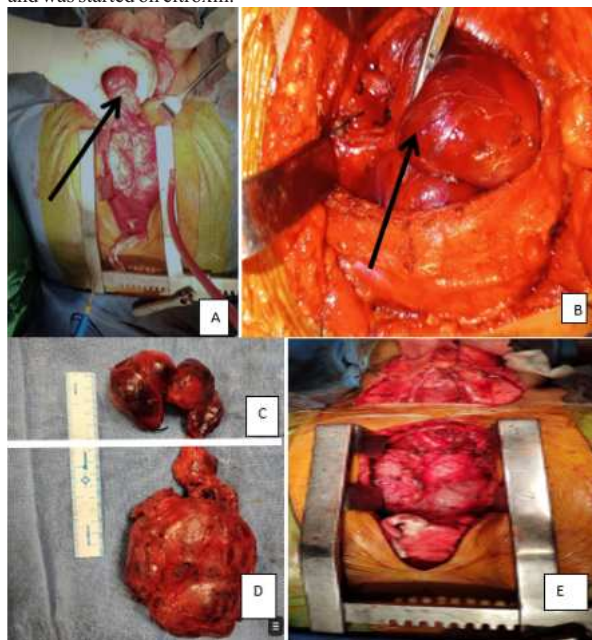


Figure 3- Showing Intraoperative And Postoperative Images
A- Showing mediastinal mass (intraoperative), B- Showing enlarged thyroid gland (intraoperative), C- Thyroid, D-Mediastinal mass (Post-operative) and E- Post-operative image.

D. HISTOPATHOLOGY-

Both the mass as well as thyroid was sent for the histopathological correlation and both the specimens showed features of multinodular colloid goitre

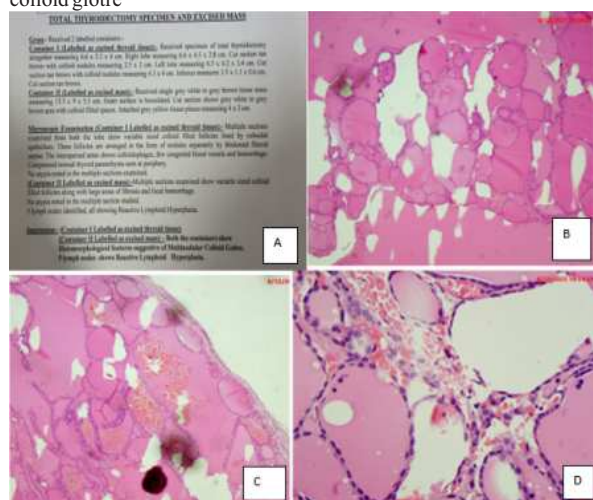


Figure 4- A- Histopathological Report, B And C- 40 X Magnification Showing Thyroid Nodules And Capsule, D- 400 X Magnification Showing Colloid Filled Follicles Lined By Cuboidal Epithelium.

DISCUSSION

Thyroid is the first gland to develop originating on the median surface of the developing pharyngeal floor. It then migrates anterior to the trachea to reach its final location. During this process of migration, thyroid gland is connected to the tongue by the thyroglossal duct. The descent of the thyroid gland occurs anterior to the laryngeal cartilages and hyoid bone.

Ectopic thyroid tissue is defined as ectopic thyroid tissue present at an abnormal site. Lingual thyroid/ position is the most common location. Other rare sites of an ectopic thyroid gland include the esophagus, mediastinum, lung, heart, abdomen and aorta (4).

Presence of ectopic thyroid tissues in distant locations could happen as a result of abnormal migration (5). There is also a suggestion that an

over descent of results ectopic thyroid tissue in the mediastinum (6).

A thyroid tissue as well as mass usually demonstrates high CT density on plain (7). So thyroid is easily differentiated from lymph nodes.

Generally, malignant transformation in ETT is very rare (8). Nevertheless, these masses should be resected as early as possible.

Although very rare, physicians should consider the possibility that mediastinal ectopic thyroid tissue could be a differential diagnosis of a mediastinal mass. Differentiating ectopic thyroid tissue from other mediastinal masses is extremely important because correct diagnosis affects management and outcome.

Some of the important differential diagnoses of anterior mediastinal mass include thymic tumors, lymphomas and dermoid cysts. Awareness of the possibility of the existence of normal and maybe functional thyroid tissue is necessary before planning surgical removal, chemotherapy or radiation therapy.

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