



Case Report

Dual ectopic thyroid mimicking as a thyroglossal cyst – A case report and review of literature

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ABSTRACT

Ectopic thyroids are very rare condition. However, they can be confused with more common conditions like colloid cyst or thyroglossal cysts. We present the case of a 15-year-old Indian female who was clinically diagnosed with thyroglossal cyst and was posted for surgery. However, on further investigation, the condition was found out to be a dual ectopic thyroid following computed tomography and was confirmed by Tc-99m thyroid scan. The patient was put on follow up and no surgical intervention was performed. Hence midline swellings of neck should be thoroughly examined before performing surgery, keeping the possibility of ectopic thyroids in view.

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1. Introduction

Ectopic thyroid is an uncommon embryological aberration characterized by the presence of thyroid tissue in a site other than in its usual pre-tracheal region. It occurs due to an arrest along the descent path of the developing thyroid primodium from the foramen caecum. The thyroid primodium develops as an endodermal bud from the anterior floor of pharynx and descends down on either sides of the trachea to its pretracheal site where it fuses with the caudal prolongation of the fourth pharyngeal pouch to form the thyroid gland. Arrest in descend can occur just below the foramen caecum (lingual) or between geniohyoid and myoid muscle (sublingual), or just above and below the level of hyoid bone. Due to the close relation among the developing thyroid, aortic trunk and septum transversum, ectopic thyroid can rarely present itself in superior mediastinum or pericardial sac or even in the developing heart. The prevalence of the ectopic thyroid tissue ranges between 7 and 10%. Lingual thyroid is the most common ectopic thyroid accounting for 70–90% of all cases with prevalence between 1: 100,000 and 1: 300,000 and a clinical incidence between 1: 4000 and 1: 10,000 [1]. Simultaneous presence of two ectopic foci of thyroid tissue is rare, and a very few such cases of dual thyroid ectopia has been reported. In most cases, the normal

thyroid gland is absent. We present a case of a 15-year-old female who was clinically diagnosed with thyroglossal cyst and on further investigation, the condition was found to be dual ectopic thyroid. The rarity of dual ectopic thyroid in the absence of thyroid gland and the possibility of a midline neck swelling being misdiagnosed as thyroglossal cyst in an asymptomatic patient, led me to report this case and understand the need for further investigation of the ectopic thyroid in an adolescent age group.

2. Case report

A 15-year-old girl was brought to the outpatient department with complaints of swelling on the front part of her neck since her childhood and foreign a body sensation in her throat for 3 years. There was no breathing or swallowing difficulty. There were no complaints suggestive of hypo or hyperthyroidism and no family history as well. On examination, there was a 2 cm × 2 cm firm swelling in the midline that was moving up with deglutition and protrusion of tongue (Fig. 1). The thyroid function tests were normal. A clinical diagnosis of thyroglossal cyst was made. Fine needle aspiration cytology done for the neck swelling revealed a colloid cyst. To further plan for excision, Contrast enhanced computed tomography (CT scan) was done which revealed no thyroid at normal site (Figs. 2.1 and 2.2). Thyroid tissue was instead identified at the subhyoid and base of tongue region in the midline. A Tc-99m thyroid scan showed adequate tracer uptake in neck swelling and at the base of tongue (Fig. 3.1), which on hybrid SPECT-CT was localized to midline lesion in the posterior of one

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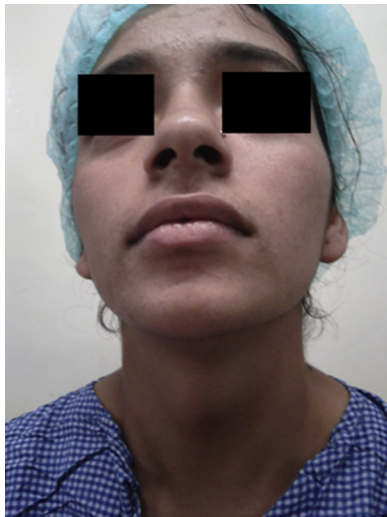


Fig. 1. Patient with midline neck swelling.

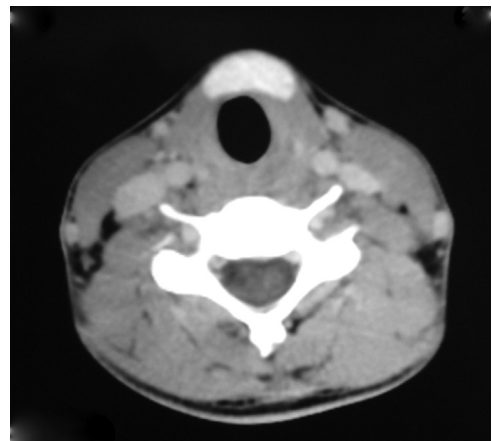


Fig. 2.2. CECT showing thyroid tissue in the subhyoid region.

third of tongue and midline infrahyoid region (Fig. 3.2). No tracer uptake was noted in the region of orthotopic thyroid gland. The patient was kept under follow up.

3. Discussion

Ectopic thyroid may be asymptomatic or can produce symptoms in depending on its location. Lingual thyroid can cause foreign body sensation in the tongue, dysphagia, dysphonia, or a sensation of choking. All diseases capable of affecting the normal thyroid can affect the ectopic thyroid like adenoma, hyperplasia, inflammation, and malignancy. The rate of malignant transformation occurrence in ectopic thyroid is not greater than its occurrence in normally placed thyroid. Carcinoma of the lingual thyroid is a rare clinical entity with an estimated incidence of 1%. Follicular carcinoma is the commonest histopathological subtype. However, at other sites, papillary carcinoma is commonly seen. The most important diagnostic modality for ectopic thyroid is a thyroid scan

with Technetium-99m. Ultrasonography, CT scan, and MRI may help in defining the extension and location of the ectopic thyroid gland. Thyroid scan also detect the presence of other sites of thyroid tissue.

An extensive search in literature revealed 26 cases (Table 1) of dual ectopic thyroid reported till date. As in our case, most of the patients were of adolescent age group except for one patient who was 71. All the patients had either lingual or sublingual as one of the ectopic sites. Subhyoid was the next common site followed by suprahyoid and submandibular being the least common. Majority of the patients were euthyroid, followed by hypothyroidism. One of the patients was presented with hyperthyroid orbitopathy. Thyroid scan could detect the ectopic thyroids in most of the cases. Thyroid replacement therapy was enough for patients with hypothyroidism, whereas in those presenting with large neck mass or dysphagia surgical excision was done.

Subhyoid ectopic thyroid usually presents itself as a midline neck swelling which moves on deglutition and often on protrusion of tongue. Usually the sublingual thyroid is asymptomatic. The midline neck swelling is more often confused as a thyroglossal cyst, which is more common developmental aberration due to persistent thyroglossal duct. In a case report by Baik et al. [2], a

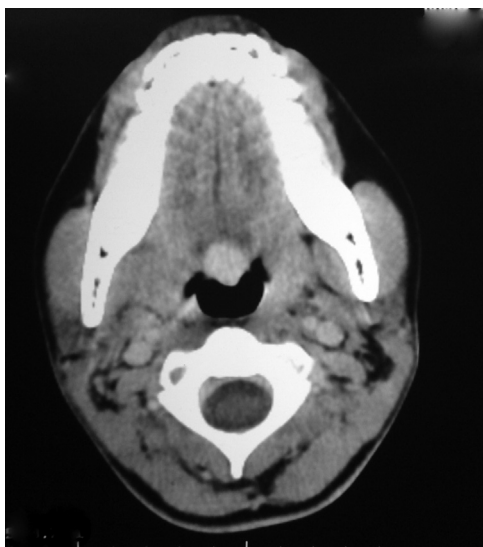


Fig. 2.1. CECT showing thyroid tissue in base of tongue.



Fig. 3.1. Thyroid scan showing dual ectopic thyroid.

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