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Ectopic Lingual Thyroid: A Case Presentation

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Abstract **Case Report**

Lingual thyroid is by far the most common manifestation of ectopic thyroid. Although often asymptomatic, it is associated with congenital hypothyroidism and, most importantly, the absence of the thyroid in its usual position, making it the only functional thyroid tissue the patient has in many cases. It appears indistinguishable from thyroid tissue that located in the proper anatomical position on imaging, with strong homogeneous enhancement on contrast CT. Here we report the clinical and imaging presentation of lingual thyroid in a 33-year-old female.

Keywords: Lingual, Thyroid, Ectopic, Female, Ultrasonography, CT.

INTRODUCTION

Ectopic thyroid is a rare embryonic variant that can occur during migration of the thyroid gland, leading to ectropion. Ectopic thyroid glands are divided into four general groups: lingual (at the base of the tongue), sublingual (under the tongue), prelaryngeal (in front of the larynx), and substernal (in the mediastinum). The lingual thyroid can be considered circular between the papillae, from the base of the tongue to the epiglottis. Lingual thyroid is the most common. Approximately 400 cases of symptomatic patients have been reported in the literature, but the true incidence is underestimated due to asymptomatic patients. Extralingual thyroid is a differential diagnosis with swelling of the posterior part of the tongue that the clinician should always explore. Clinical history, basic radiographs, and histological examination can all be used to determine the presence of an ectopic thyroid. The main objective of this article is to show the path to the diagnosis of lingual thyroid in patients with euthyroid disease.

CASE PRESENTATION

We present the case of a 33-year-old female who was admitted to our department for progressive solid-feeding dysphagia. Her medical history was irrelevant.

The patient did not report any acute symptoms on examination, her vital signs, including blood pressure, pulse and respiratory rate, were within normal ranges, physical examination of the neck revealed a hard, mobile mass at the base of the tongue, behind the surrounding papillae. This mass was about 2 cm in diameter. Initial laboratory tests, including a complete blood count and comprehensive metabolic panel, showed no abnormalities. Serum thyroid hormone levels were within the normal range, cervical ultrasound revealed an empty thyroid cavity with an ovoid mass opposite the base of the tongue, discretely vascularized on Doppler, measuring 2.5 x 2 cm a CT-Scan (A contrast-enhanced CT) scan of the neck confirmed the presence of the lingual thyroid and ruled out any other significant cervical abnormalities. The patient was diagnosed with an ectopic lingual thyroid, a rare condition in which thyroid tissue is located in an abnormal position, in this case, at the base of the tongue. This condition was likely the cause of her recent symptoms, including difficulty swallowing and throat discomfort, the management of the patient's ectopic lingual thyroid was discussed with her. Given the size of the mass and her symptoms, surgical intervention was recommended. The patient agreed to proceed with surgery, and a partial lingual thyroidectomy was scheduled, under general anesthesia, a transoral approach was used to access the lingual thyroid. A midline incision was made on the tongue's dorsum, and the mass was carefully dissected from the surrounding tissue. Hemostasis was achieved, and the surgical wound was closed with absorbable sutures. The patient postoperative course was marked with no complications, she was observed in the hospital for 48 hours to monitor for any signs of bleeding, infection, or airway compromise. Pain was managed with oral analgesics.

Case Study: Ectopic Lingual Thyroid of a 33-year-old female

Patient Information:
Age: 33

Gender: Female

Chief Complaint: We present the case of a 33-year-old girl who was admitted to our department for progressive solid-feeding dysphagia. Her medical history was irrelevant.

Physical examination: The patient did not report any acute symptoms on examination, her i vital signs, including blood pressure, pulse and respiratory rate, were within normal ranges.

Physical examination of the neck revealed a hard, mobile mass at the base of the tongue, behind the surrounding papillae. This mass was about 2 cm in diameter.

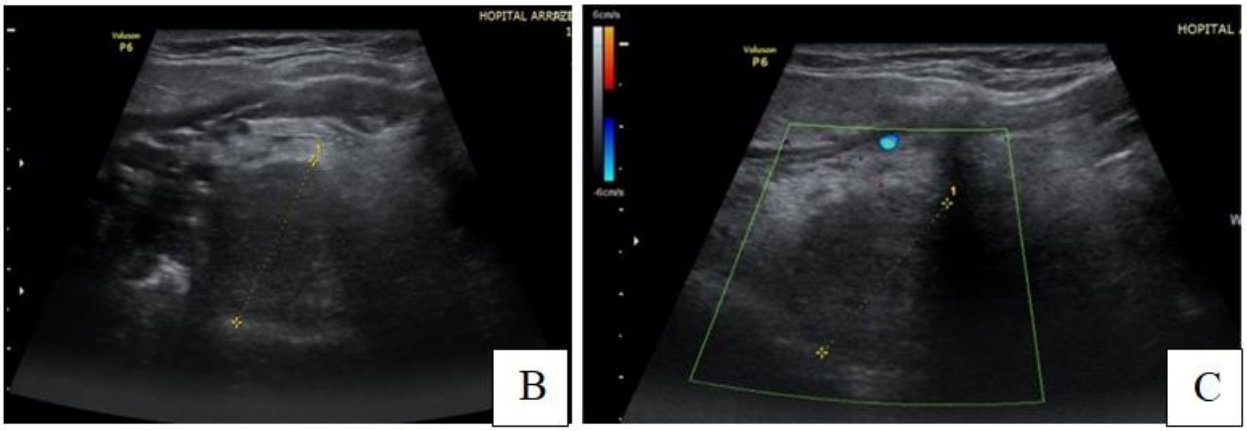
Diagnostic Evaluation:

Blood Tests: Initial laboratory tests, including a complete blood count and comprehensive metabolic panel, showed no abnormalities. Serum thyroid hormone levels were within the normal range.

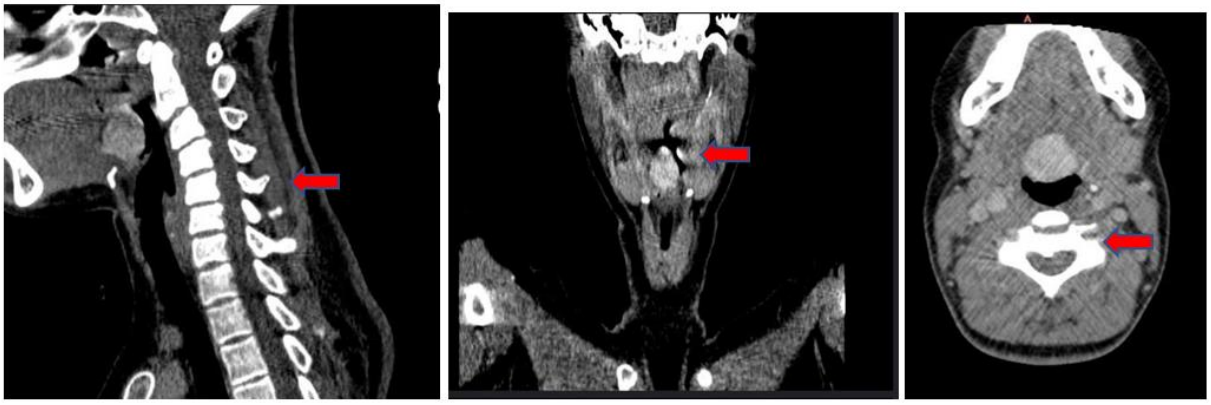
Thyroid Imaging: Cervical ultrasound revealed an empty thyroid cavity with an ovoid mass opposite the base of the tongue, discretely vascularized on Doppler, measuring 2.5 x 2 cm.

A CT-Scan: A contrast-enhanced CT scan of the neck confirmed the presence of the lingual thyroid and ruled out any other significant cervical abnormalities.

A: Axial section cervical ultrasound from the ERRAZI radiology department showing an empty thyroid cavity



B/C: Longitudinal section of cervical ultrasound from the ERRAZI radiology department: an ovoid mass over the base of the tongue, suggesting a lingual thyroid gland measuring 2 x 2,5 cm



A cervico-thoracic CT scan revealed a basi-lingual formation with a long axis of 23.5 mm, suggesting in the first instance a lingual thyroid ectopy (red arrow)

Diagnosis:

The patient was diagnosed with an ectopic lingual thyroid, a rare condition in which thyroid tissue is located in an abnormal position, in this case, at the base of the tongue. This condition was likely the cause of her recent symptoms, including difficulty swallowing and throat discomfort.

Treatment:

The management of the patient's ectopic lingual thyroid was discussed with her. Given the size of the mass and her symptoms, surgical intervention was recommended. The patient agreed to proceed with surgery, and a partial lingual thyroidectomy was scheduled.

Surgical Procedure:

Under general anesthesia, a transoral approach was used to access the lingual thyroid. A midline incision was made on the tongue's dorsum, and the mass was carefully dissected from the surrounding tissue. Hemostasis was achieved, and the surgical wound was closed with absorbable sutures.

Postoperative Course:

The patient postoperative course was marked with no complications, she was observed in the hospital for 48 hours to monitor for any signs of bleeding, infection, or airway compromise. Pain was managed with oral analgesics.

DISCUSSION

During the third and fourth weeks of embryonic development, primitive thyroid tissue arises from the fusion of the anterior and posterior portions of the tongue. From the sixth week, this canal disappears and opens into the pharynx in the form of an opening at the base of the tongue. At the end of the 7th week, the two lobes are connected by an isthmus in the cervical spine, while the cells of the duct transform into thyroid tissue, forming the pyramid of the silhouette. The most common location is upper thyroid ectopy: lingual, sometimes prehyoid or infrahyoid [1].

Clinically, ectopia can manifest as hypothyroidism or as pressure phenomena such as dysphagia, dysphonia, or dyspnea; Hyperthyroidism and neoplastic lesions are rare; The presence of a palpable posterior lingual mass suggests the diagnosis [2].

The ultrasound is only useful to demonstrate the absence of thyroid tissue in the correct position, which is the case in most cases. Only occasionally do patients find thyroid tissue at the base of the tongue and other parts of the neck as a core of more or less homogeneous solid tissue [3].

Computed tomography can be used to estimate the density of the mass, its boundaries, location, and connection with the vascular axes, and to objectify a hyperdense mass of the same density as normal thyroid tissue, which is hyperdense because of the normal accumulation of iodine in this tissue gland [4].

MRI can be used to examine the tumor, identify the vascular contingent of the tumor, detect perineural dilation and localize it around the vascular axis [5].

The treatment is mostly therapeutic abstinence; in cases where surgical removal is planned, it is important to determine if there is normal thyroid tissue elsewhere, since removal of the lingual thyroid will result in hypothyroidism in most cases [6, 7].

CONCLUSION

This case highlights the importance of considering uncommon causes of throat symptoms, even in patients with known thyroid disorders. Ectopic lingual thyroid, though rare, should be considered in the differential diagnosis when evaluating patients with thyroid-related symptoms, especially when conventional treatment approaches do not provide relief.

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Conflicts of interests: The authors have no conflicts of interests and no financial issues to disclose.

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