Case Report

Lingual Thyroid with Right Internal Jugular Vein Phlebectasia : A Rare Case Report

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ABSTRACT

Lingual thyroid gland is a rare entity which occurs due to the failure of the thyroid gland to descend into its usual pretracheal position during embryogenesis. The reported incidence of lingual thyroid is more common in females. When located at the base of the tongue, ectopic thyroid gland is often asymptomatic but may cause local symptoms such as difficulty in swallowing, hoarseness and a foreign body sensation in the throat, hemorrhage and often presents with hypothyroidism. The diagnosis of lingual thyroid is usually made clinically along with imaging studies and radionuclide scanning is used to confirm diagnosis. A case of lingual thyroid with right internal jugular vein phlebectasia in a 4-year-old male is presented for its rarity and for differential diagnosis of midline base of the tongue lesions.

Key words: Ectopic thyroid, Hypothyroidism, Lingual thyroid

The thyroid gland exerts effects on practically all nucleated cells in the human body, generally increasing their overall functionality and metabolism. At 7 weeks of pregnancy, the thyroid starts to develop, and at 12 weeks, the thyroxine hormone is generated [1]. The majority of developmental thyroid disorders are caused by morphogenetic apocope made throughout the developing stage [2]. Thyroid dysgenesis is responsible for 80–90% of permanent primary congenital hypothyroidism cases, with thyroid ectopia accounting for about 60% of these cases [3]. From the base of the tongue to the diaphragm, ectopic thyroid tissue can occur anywhere, however, the majority of ectopias are lingual thyroid [1]. Clinical diagnosis of lingual thyroid includes local examination of the tongue base and neck associated with the absence of normally located thyroid gland, and imaging studies. Neck imaging tests include neck CT scans, neck MRIs, neck ultrasounds, and scintigraphy employing Tc 99m, I-131, and I-123 are needed to confirm the diagnosis.

CASE REPORT

We report a case of a 4-year-old male who presented with complaints of difficulty in passing stools. He denied any history of difficulty in swallowing, hoarseness and a foreign body sensation in the throat. His past medical history was insignificant. His mother denied receiving any medications during pregnancy. On physical examination, there was a mass covered with smooth mucosa, located on the base of the tongue, extending to the hypopharynx and obstructing the visualization of the larynx. Examination of the neck revealed no cervical lymphadenopathy and no palpable thyroid gland in the expected cervical location. The serum thyroid profile of the patient showed normal FT3, FT4 and elevated thyroid stimulating hormone (TSH) levels. Other laboratory tests were within normal limits. A provisional diagnosis of lingual thyroid was made based on its location and symptomatology. Further investigations were carried out.

Ultrasonography of neck revealed an ectopically located thyroid gland near sublingual region with multiple incomplete thin echogenic septa. Colour Doppler study shows hyper vascularity within the gland and complete luminal filling of the right internal jugular vein with fusiform dilatation and intermittent aliasing suggesting turbulence of flow.

Contrast-enhanced computed tomography (CECT) examination suggested a well-defined and mostly homogeneous hyperdense mass with distinct margins restricted to the base of the tongue and absence of the thyroid gland in the normal eutopic pretracheal position. A thyroid scan with technetium Tc-99m sodium was planned but the patient's parents refused further investigations due to economic

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constraints. The patient was diagnosed with lingual thyroid and was advised for lifelong thyroxine replacement in-light of the above diagnosis. Substitutive hormone therapy was initiated in order to maintain the euthyroid state placed on thyroxine sodium 50 µgOD. Patient was advised re-evaluation after 3 months to titrate the thyroxine dosage.

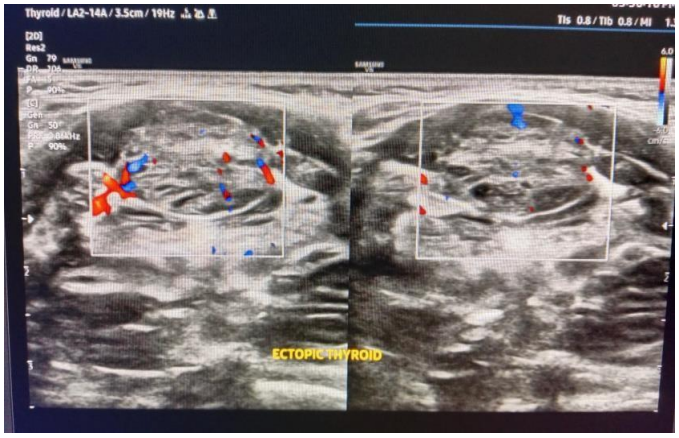

Image 1: Ultrasonography of Neck

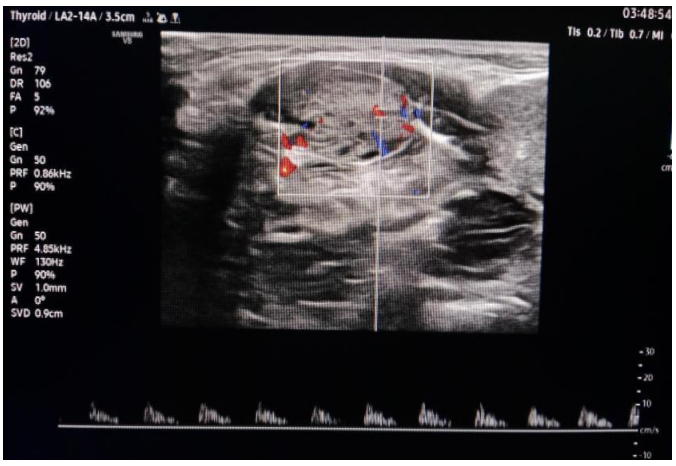

Image 2: Ultrasonography of Neck

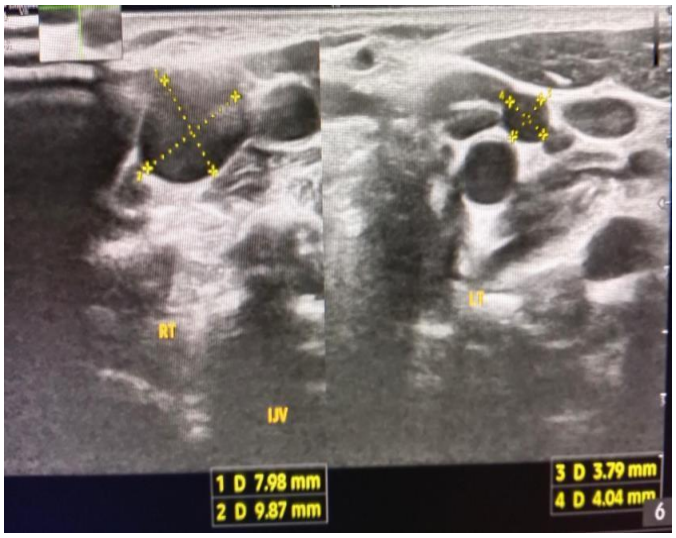

Image 3: Ultrasonography of Neck

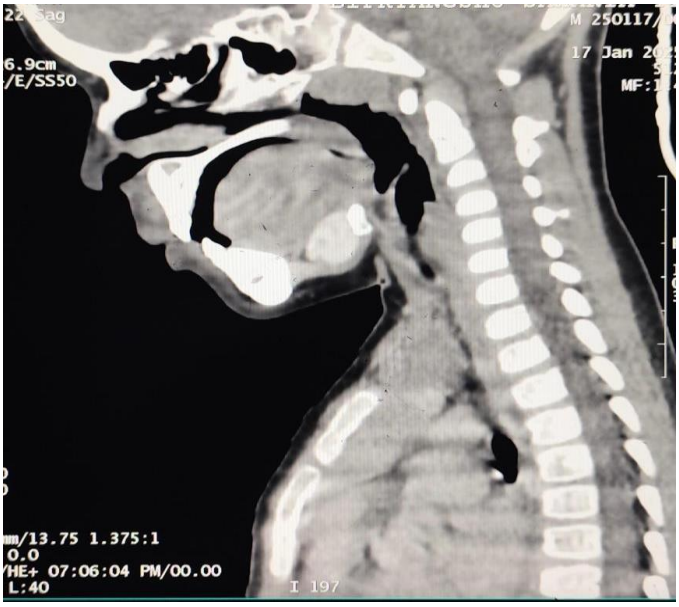

Image 4: Contrast-enhanced CT scan of Neck

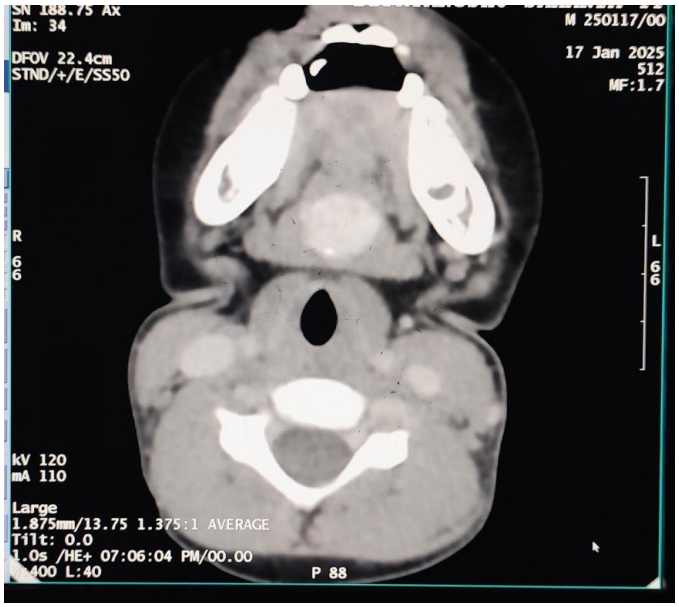

Image 5: Contrast-enhanced CT scan of Neck

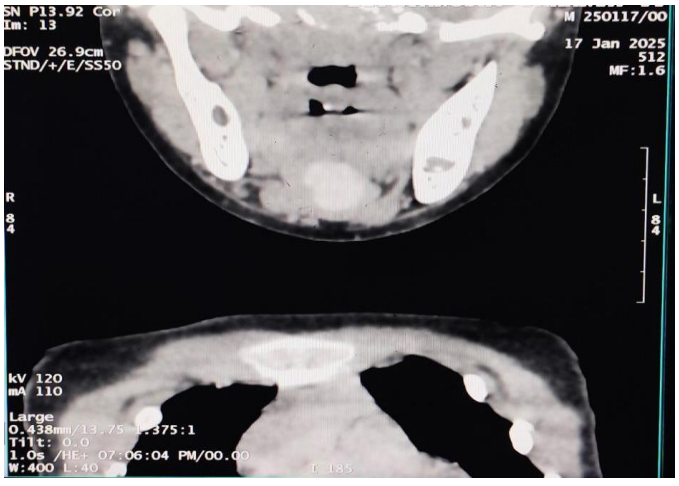

Image 6: Contrast-enhanced CT scan of Neck

DISCUSSION

The thyroid gland is the first endocrine gland that develops during fetal embryology. Lingual thyroid is defined as the presence of thyroid tissue in the midline at the base of the tongue anywhere between the circumvallate papillae and the epiglottis [4, 5]. It is caused due to aberrant embryogenesis during the descent of thyroid gland to the neck [6]. The first ectopic thyroid was reported by Dr. Hickman in a neonate who passed away from asphyxia and acute respiratory distress 16 hours after birth [7]. Lingual thyroid arises due to embryonic failure of normal thyroid tissue to descend from the foramen cecum area of the tongue base to the lower part of the neck in front of thyroid cartilage [8]. The incidence of lingual thyroid is seven times higher in females [9].

Recently, genetic research has demonstrated that the gene transcription factors TITF-1(Nkx2-1), Foxe1 (TITF-2), and PAX-8 are essential for thyroid maturation and differentiation. Mutation in these genes may share a connection with abnormal migration of the thyroid [10]. The management of lingual thyroid is still debatable. When the lingual thyroid is asymptomatic and the patient is in a euthyroid condition, no therapy is necessary. If emergency surgery is not necessary, suppression therapy should be tried first in order to decrease the dimensions of the mass. The most crucial factors for treatment planning are the patient's overall health, the extent of the lesion, and the existence of any local symptoms or consequences.

CONCLUSION

Always consider the possibility of an ectopic thyroid in children who have regular elevated TSH levels with particularly respiratory or dysphagia symptoms and such cases should always be evaluated by an endocrinologist. To the best of our knowledge, this is the first reported case of lingual thyroid with right internal jugular vein phlebectasia from this part of the country.

Author Contributions

Dr Soumik Chatterjee and Dr Mayukh Bhattacharya were responsible for the ongoing care of the patient, research and drafting the manuscript. All authors have read and approved the final manuscript.

REFERENCES

1. Hashemian S, Eshraqhi P, Vakili R, *et al*. Lingual Thyroid: A Case Report and Literature Review. Int J Pediatr. 2017; 5(11): 6049-55.
2. Madhuri P, Vageesh A, Ganapathi B, *et al*. Thyroid ectopia: A case series and literature review. Thyroid Research and Practice September- 2015; 12(3):110-15.
3. Vliet GV. Hypothyroidism in infants and children: Congenital hypothyroidism. In Werner and Ingbar's The Thyroid: A Fundamental and Clinical Text. 9th ed. Philadelphia: Lippincott Williams & Wilkins; 2005.p.1034.
4. Williams JD, Sclafani AP, Slupchinskij O, *et al*. Evaluation and management of the lingual thyroid gland. Ann Otol Rhinol Laryngol. 1996; 105(4):312-6.
5. Rao K, Shenoy VS, Kamath PM, *et al*. A Case of Lingual Thyroid. Ann Clin Investig. 2020; 1(1):1002.
6. Leger J, Marinovic D, Garel C, *et al*. Thyroid developmental anomalies in first degree relatives of children with congenital hypothyroidism. J Clin Endocrinol Metab. 2002; 87(2):575-80.
7. Hickman W. Congenital tumour of the base of the tongue, pressing down the epiglottis on the larynx and causing the death by suffocation 16 hours after birth. Trans Pathology Soc London. 1869; 20:160-3.
8. Thathekavla SR, Ponnam SR, Srivastava G. Lingual Thyroid: Case Report and Management. J Indian Aca Oral Med Rasiol. 2013; (3):235-7.
9. Mehta M. Lingual Thyroid. Indian J Otolaryngol Head Neck Surg. 1998; 50(3): 272-4.
10. Ibrahim NA, Fadeyibi IO. Ectopic thyroid: etiology, pathology and management. Hormones (Athens). 2011; 10(4):261-9.

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