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Ectopic Thyroid Mimicking A Thyroglossal Duct Cyst: A Case Report

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Thyroid ectopy is a rare condition, caused by dysfunction during migration of the thyroid gland during its embryogenesis. It is generally associated with subclinical hypothyroidism. Patients with this pathology are mostly asymptomatic. It is seen in childhood by an anterior cervical mass which confuses it with a cyst of the thyroglossal tract. The diagnosis is made by ultrasound imaging, scintigraphy and histological examination. Management is essentially hormonal. Surgery is considered in case of complication.

Keywords: Ectopic thyroid; Thyroglossal Duct Cyst; Fine needle aspiration cytopunction

Abbreviations: The thyroglossal duct cyst (TGDC); Fine needle aspiration cytopunction (FNAC)

Introduction

Ectopic thyroid refers to the presence of thyroid tissue in locations other than the normal anterior neck region between the second and fourth tracheal cartilages¹. It is the most frequent form of thyroid dysgenesis, accounting for 48-61% of the cases. Prevalence of this condition is reported to be between 1 per 100,000-300,000 persons and occur one in 4,000-8,000 patients with thyroid disease [1]. The thyroglossal duct cyst (TGDC) is the most common congenital malformation in the neck, accounting for 70% of all congenital neck lesions. It may occur at any age. Most are detected in the first 2 decades of life [2]. Ectopic thyroid can be found along the way of thyroid descent, in the midline, or laterally in the neck or even in the mediastinum or under the diaphragm or in other different site.

We report the course and management of a child with ectopic thyroid which mimicked as thyroglossal duct cyst.

Case Presentation

This case is about a 7 years-old female child who presented

in ENT outpatient department for midline neck mass, evolving for one year, and increasing the size slowly. There was no history of dysphagia, dyspnea, dysphonia, recurrent respiratory tract infections or dysthyroidism.

The clinical examination midline neck mass, firm, swelling, measuring 2×1 cm in size in the hyoid region moving with deglutition and protrusion of tongue, on good general condition. Examination of cardiovascular system and abdominal region was normal. Patient was at first diagnosed to have thyroglossal duct cyst.

A neck ultrasound was performed and revealed that the midline and lateral trachea mass was the only functioning thyroid tissue.

Thyroid function tests revealed a high TSH: 15,3 mIU/mL (0.3-5.5 mIU/mL),

Fine needle aspiration cytology-thyroglossal cyst was performed, thyroid peroxidase antibody 26 U/mL (1-34U/mL).99 TC.

The patient was finally diagnosed with ectopic thyroid with subclinical hypothyroidism, and received L-thyroxine 50 mcg/day. Surgery was not necessary on this case.

After 6 months follow-up, the patient was doing well, with normal TSH at 1,3 mIU/mL. There was no evolution of the mass size (Figures 1, 2).

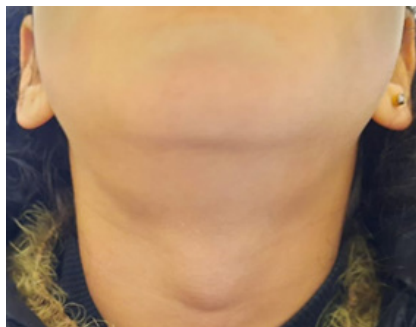


Figure 1: Midline neck mass.



Figure 2: Ultrasound showing thyroid tissue on front and right side of trachea.

Discussion

Ectopic thyroid tissue is defined as any tissue not located anterior and lateral to the second, third and fourth tracheal rings. This can occur anywhere along the path of descent of the normal thyroid gland [3]. Ectopic thyroid is a rare entity with a prevalence of approximately 1 per 100 000 to 300 000 persons and is reported to occur in 1 of every 4000 to 8000 patients who have thyroid disease [4].

The most common site of ectopic thyroid is a lingual thyroid. The wall of a thyroglossal duct cyst is the second most common site for ectopic thyroid tissue [5]. The thyroglossal duct cyst (TGDC) is the most common congenital malformation in the neck, accounting for 70% of all congenital neck lesions. It occurs as a result of failure of the thyroglossal duct to obliterate during embryonic development.

Ectopic thyroid is essentially asymptomatic, but 30% of patients present with hypothyroidism. The pathophysiology of hypothyroidism in ectopic thyroid is explained by an aberration in the migratory pathways of the rudimentary thyroid that can lead to ectopy, which almost certainly results in inadequate blood supply to support normal thyroid function. Genetic factors leading to abnormal function and morphology may also contribute to hypothyroidism in these patients [4]. To diagnose an ectopic

gland imaging methods such as scintigraphy, fine needle aspiration cytopunction (FNAC) employ technetium-99m pertechnetate which differs to other isotopes because of the better quality of imaging and the less radiation dose, so it might be used in children [6].

The treatment of the ectopic thyroid depends on the functional status of the thyroid, and the presence of compressive symptoms. Levothyroxine treatment is recommended for patients with hypothyroidism. Surgery is recommended for patients with a large thyroid gland causing pressure symptoms or thyroid showing malignancy signs.

Conclusion

Ectopic thyroid remains a rare disease. When it presents as a midline neck mass, it can be easily confused with a Thyroglossal Duct Cyst. Imagery and fine needle aspiration cytopunction (FNAC) using technetium-99 m pertechnetate is necessary for diagnosis, leading to an adequate treatment.

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Conflict of Interest

The authors declare no conflict of interest.

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