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Case report

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A rare cause of dysphagia in a pregnant woman: ectopic lingual thyroid

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Abstract

Ectopic thyroid is the presence of thyroid tissue outside of its normal cervical site. It results from an abnormality in embryological development. The diagnosis is mainly established on clinical examination and imagery. Therapeutic options remain essentially medical and must take into account physiological needs for thyroid hormones. The indications and techniques of surgery are discussed. We report a rare case of ectopic lingual thyroid diagnosed in 32-year- old pregnant woman complaining of mild intermittent dysphagia.

Introduction

Ectopic thyroid is a rare pathology due to the abnormal migration of thyroid cells during embryogenesis [1]. Its frequency varies between 1/4000 and 1/8000 among hypothyroid patients [2]. Its clinical repercussions are diverse, depending on whether the thyroid tissue is functional or not. Ectopic thyroid can be asymptomatic, manifest as clinical or biological hypothyroidism or more rarely it can cause the compression of the upper airways. Imagery helps guide the diagnosis and the therapeutic attitude [3]. We report a case of a 32-year-old pregnant woman in whom the diagnosis of ectopic thyroid was made late and we present a review of clinical presentation, diagnosis and management of such lesions.

Patient and observation

A 32-year-old pregnant woman, at 22 weeks of amenorrhea, with no other significant medical history, presented with mild intermittent dysphagia evolving for three months. The interrogation did not identify any signs of dysthyroidism or deterioration of the general condition. On oropharyngeal examination, there was a rounded formation with intact mucosa, located at the base of the tongue. To the touch, this mass was firm, smooth, homogeneous and painless, not bleeding on contact. The thyroid compartment was free. The rest of clinical examination was unremarkable. Nasofibroscopy was undertaken which showed a mass attached to the base of the tongue (Figure 1). Cervical ultrasonography revealed an empty thyroid compartment. The explorations were completed by magnetic resonance imaging which confirmed the vacuity of the thyroid compartment and showed a basilingual thyroid gland with no detectable focal parenchymal abnormality (Figure 2). Scintigraphy was not carried out because it is contraindicated since the patient was a pregnant lady. Hormonal evaluation including thyroid stimulating hormone (TSH), triiodothyronine (T3) and thyroxine (T4) was normal. The diagnosis was confirmed by a cytological examination following a needle aspiration. Due to the absence of compressive symptoms, the ectopic thyroid was not removed and the patient was placed under clinical and biological monitoring. The patient had remained well with no increase in size or worsening of symptoms or disturbance in the biological balance for over 24 months.

Discussion

Embryologically, after the second week of gestation, the thyroid gland appears in the floor of the pharyngeal intestine (foramen cecum) on the midline. It gradually follows a caudal and ventral direction, along the thyroglossal tract. At the seventh week, it reaches its final headquarters below the thyroid cartilage, opposite the 5th and 6th tracheal rings. Any disruption of this migration can lead to ectopic thyroid, the pathogenesis of which is still poorly understood [4]. Hickman, in 1869, was the first to describe the case of a newborn who died of suffocation due to an ectopic lingual thyroid [5]. The lingual thyroid is the most common since it accounts for 90% of ectopic thyroids [6,7]. In the 10% of the remaining cases, it is sublingual, sub-mandibular or more rarely mediastinal localization. It is a rare condition that affects women more than men with a sex ratio of 1/4 [8]. The circumstances and the age of discovery of ectopic thyroid depend on the size of the ectopic focus as well as whether it is functional or not and may or may not be associated with hypothyroidism. Thus, secreting ectopic thyroids can go unnoticed thus ensuring normal growth during the very first years of life. They will not be revealed until late at a slightly older age advanced, at puberty or during pregnancy, as the need for thyroid hormones becomes more pronounced in such circumstances [5]. This explains the rather late age of discovery of the pathology in our patient. The manifestations most often observed during a lingual ectopic thyroid are, for example, cough, pain, dysphagia, dysphonia, dyspnea and hemorrhage.

Medical imaging contributes to the affirmation of the diagnosis of ectopic thyroid [9] and to the orientation at the same time of the therapeutic strategy and the follow-up of the patient. Cervical Doppler ultrasound is the first line exam, it highlights the vacuity of the thyroid compartment and possibly the presence of an ectopic mass having the same echostructure as the thyroid tissue [6]. The thyroid scintigraphy is the method of choice to confirm the diagnosis showing a fixation of the radiotracer not at the level of the thyroid compartment but in the ectopic position [6]. The scanner, if it was carried out, makes it possible to make a positive and topographical diagnosis of ectopic thyroid in the form of a mass of variable size spontaneously hyperdense and enhancing after injection of iodinated contrast medium. The magnetic resonance imaging distinguishes the boundaries between the thyroid parenchyma and the tongue muscles, and shows an iso or hyperintense mass in T1, not or slightly enhanced after injection of Gadolinium; and hyper-intense in T2 [6]. Treatment for ectopic thyroid depends on the clinical presentation. Indeed, small lesions or pauci-symptomatic forms are subject to regular monitoring, as was the case with our patient. Hormone replacement therapy is most often established in cases of hypothyroidism, or in case of surgical resection of the ectopic thyroid tissue. The surgical indication is reserved for iterative severe hemorrhagic forms, compressive forms (dysphagia, obstruction of the airways) and the malignant transformation. Ablative therapy may be an alternative to surgery when it is not recommended or refused by the patient [10].

Conclusion

Ectopic thyroid is a rare pathology linked to a failure of migration of the thyroid gland during its embryonic development. In most cases, patients remain asymptomatic and the ectopic thyroid goes unnoticed, hence the need for radiological exploration, which is mainly based on scintigraphy. Subclinical hypothyroidism is an indication for hormone replacement therapy. Regular clinical and biological monitoring is essential. The severity of this pathology concerns the neoplastic forms with compression and hemorrhagic signs requiring surgery.

Competing interests

The authors declare no competing interests.

Authors' contributions

All the authors have contributed to the writing and editing of this article. They read and agreed to the final manuscript.

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Figures

Figure 1: endoscopic image of an ectopic thyroid showing a basilingual mass with intact mucosa

Figure 2: magnetic resonance imaging revealing a basilingual tissue mass in hypersignal T2, well limited, respecting the adjacent organs. It does not contain septas, loculi or vegetations. It is limited by a capsule in hyposignal T2. Its signal recalls the normal thyroid signal, its situation on the thyreoglossal tract and the vacuity of the thyroid compartment evokes a basilingual thyroid

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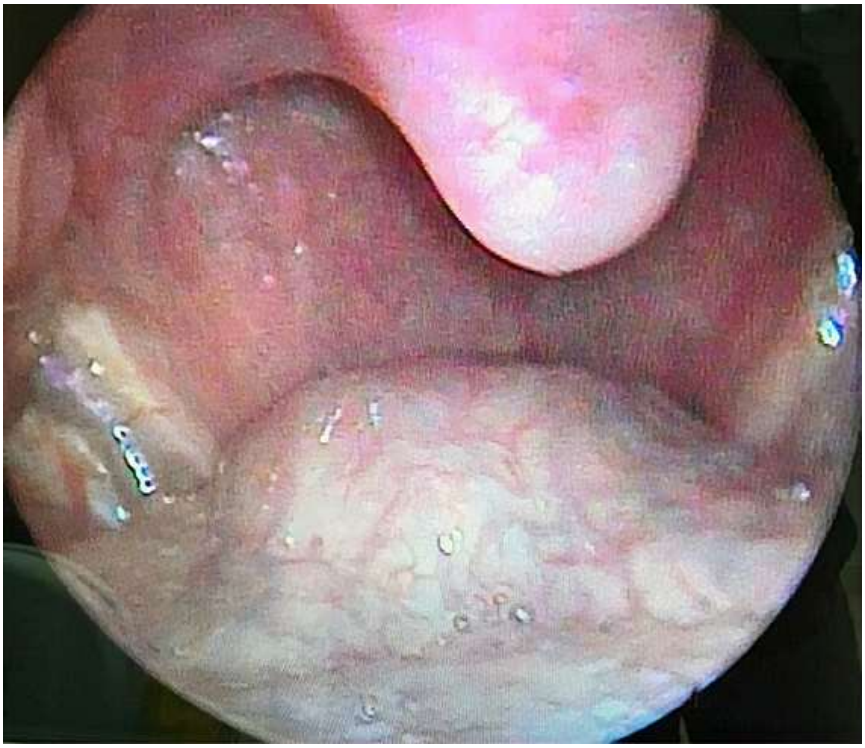

Figure 1: endoscopic image of an ectopic thyroid showing a basilingual mass with intact mucosa

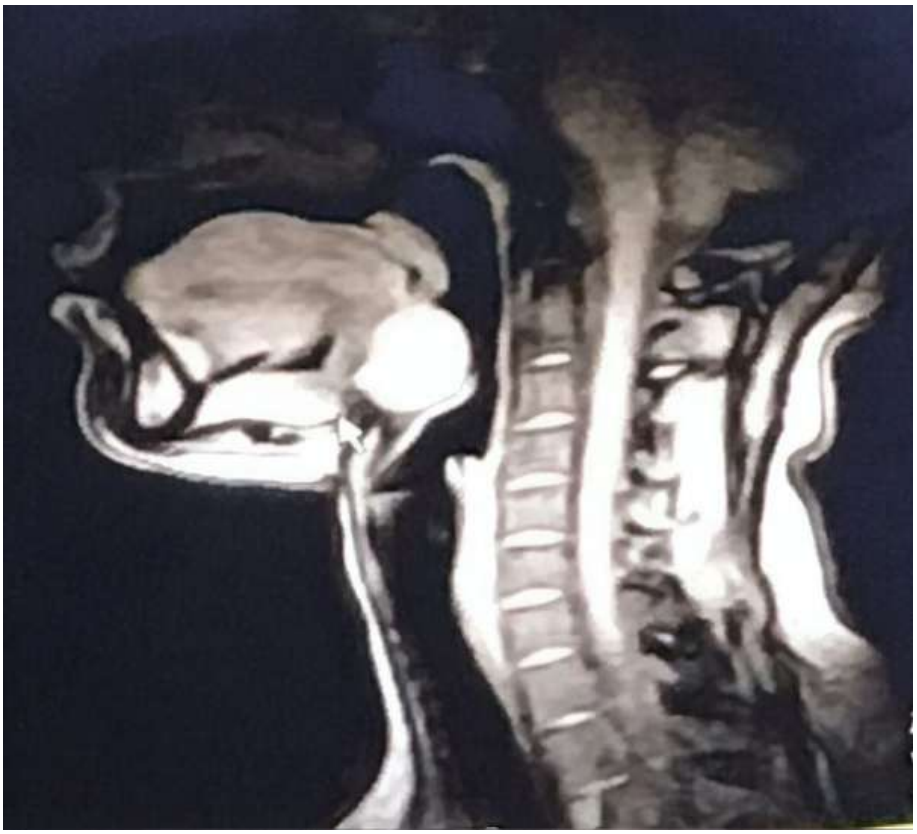

Figure 2: magnetic resonance imaging revealing a basilingual tissue mass in hypersignal T2, well limited, respecting the adjacent organs. It does not contain septas, loculi or vegetations. It is limited by a capsule in hyposignal T2. Its signal recalls the normal thyroid signal, its situation on the thyreoglossal tract and the vacuity of the thyroid compartment evokes a basilingual thyroid