



## The Ectopic Accessory Thyroid: About A Case

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### Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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### ABSTRACT

The Thyroid ectopic is a rare embryologic malformation that is defined by the presence of thyroid tissue outside of its normal position, the accessory thyroid with a thyroid gland in place is exceptional.

We report a case of an elderly patient operated on for a heteromultinodular goitre with the incidental per-operative discovery of an ectopic accessory thyroid nodule in the anterior mediastinum.

*Keywords:* Thyroid ectopic; anterior mediastinum; surgery; histology.

### 1. INTRODUCTION

Thyroid ectopic is a rare embryological abnormality defined by the presence of thyroid tissue outside its normal position [1] and maybe asymptomatic or manifest as hypothyroidism or, more rarely, may be responsible for upper airway compression. The

use of imaging is essential for diagnosis, but the intraoperative discovery is still possible [2]. The combination of thyroid ectopy and thyroid in a normal cervical position is exceptional [3].

We are reporting a case of a patient operated on for a nodular goitre with the per-operative

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discovery of an accessory thyroid nodule in the anterior mediastinum.

## 2. PATIENT AND OBSERVATION

69-year-old patient, Hypertensive on monotherapy for 10 years, hospitalized for low anterior cervical swelling, without dysphonia or swallowing disorder or dyspnea, without exophthalmia or other sign of dysthyroidism, in whom the cervical examination showed a mobile anterior low cervical swelling mobile at the deglutition, with a firm consistency without associated cervical adenopathy. Cervical ultrasound showed a multi heteronodular Goiter classified European Thyroid Association (EU-TIRADS) IV.

Thyroid stimulating hormone (TSH) us was normal at 2.6 mU /L and thyroid hormones T 3 and T4 were normal.

The patient had a total thyroidectomy with per operative discovery of a nodular mass at the anterior mediastinum measuring 4 x 3 cm. Complete removal of the mass was performed and its histological examination showed the presence of normal thyroid parenchyma with an accessory thyroid, The histological examination of the operating mass showed the absence of malignancy.

The postoperative outcomes were simple and the patient was started on L-Thyroxine, with a six-month follow-up.



Fig. 1. Cervical ultrasound showing a multi-heteronodular goitre classified EU-TIRADS IV

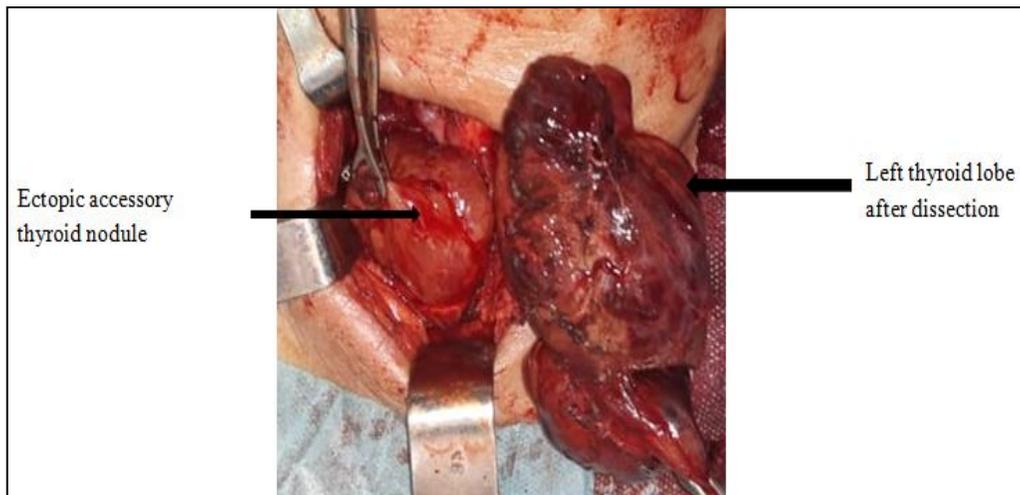


Fig. 2. The per-operative image of the accessory thyroid ectopic at the anterior mediastinum



**Fig. 3. An operative piece of the accessory thyroid**

### 3. DISCUSSION

Embryological abnormalities of the thyroid gland may be manifested by hypoplasia, agenesis or ectopy [4]. Thyroid ectopy is said to be true in the absence of the thyroid gland in its normal pretracheal position [5]. The accessory thyroid is defined by the association of a gland in place with thyroid tissue outside its previous cervical location [6]. This association is exceptional and rarely reported [7]. Ectopic thyroid tissue can be found from the tongue to the diaphragm [8]. The diagnosis is found often in children as mass at tongue base or similar to thyroid gland cyst in the anterior cervical middle line, the diagnosis at older ages is rare as in this case.

The prevalence of thyroid ectopy is estimated at 1 case for every 10,000 to 300,000 healthy individuals, but it is reported in 1 case by 4,000 to 8,000 people with thyroid disease [9]. It mainly affects women with a sex ratio of 4 women to 1 man [10]. The age of diagnosis can range from birth to 85 years old [11]. Ectopic tissue can be the site of different thyroid carcinomas but papillary carcinoma is the most common histological type [12].

The aetiology is multi-factorial in the majority of cases, associated with the embryological process, it is currently demonstrated a genetic cause in the genetic transcription factors TITF-1(Nkx2-1), Foxe1(TITF-2) and PAX-8 which are essential in the maturation and differentiation of the thyroid gland, a mutation of these genes may have a relationship with a thyroid migration defect [9].

It can manifest itself in a picture of hypothyroidism or signs of compression of the upper airways [2], or remain asymptomatic for a

long time as in the case of our patient, Hence the interest of imaging, which is essentially based on cervical Doppler ultrasound, which shows a thyroid in place associated with a heterogeneous mass in an abnormal situation [13]. Scintigraphy represents the gold standard in the diagnosis and localization of ectopic thyroids. CT and MRI can suspect and better study the relationship with adjacent structures.

Indications for surgical resection of the accessory ectopic thyroid are suspicion of malignancy, bleeding, hypothyroidism and hyperthyroidism resistant to medical treatment, or signs of respiratory compression [9].

In our case, the accidental discovery of an accessory thyroid nodule associated with a goitre suspected of malignancy was the indication of its complete removal.

### 4. CONCLUSION

The accessory ectopic thyroid is a rare and pathogenic condition that is still poorly understood. It must be mentioned in the face of any hypothyroidism in children and even adults.

Its clinical presentation is polymorphic, imaging is essential for diagnosis, but its incidental discovery per-operatively remains possible.

### CONSENT

According to the international or academic standard, patient consent was collected and retained by the authors.

### ETHICAL APPROVAL

As per international standard written ethical approval has been collected and preserved by the author(s).

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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