

## Multi-heteronodular goiter revealing thyroid tuberculosis: A case report

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### Abstract

Thyroid tuberculosis is a rare entity. The clinical symptomatology is non-specific with a picture of goiter or thyroiditis with a subacute or chronic evolution. We report an observation of thyroid tuberculosis in a 39 year old female patient presenting with a nodular thyroid goiter without general manifestations. The diagnosis was confirmed by anatomopathological examination of the total thyroidectomy specimen. Antituberculosis treatment was initiated for six months with a favorable clinical course.

**Keywords:** Thyroid Tuberculosis; Nodular Goiter; Anatomopathology Study; Antituberculosis Treatment

### 1. Introduction

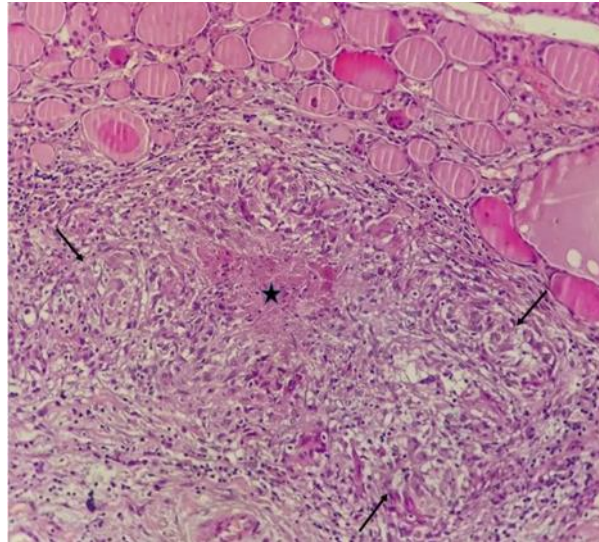
Thyroid tuberculosis is a rare entity. The clinical symptomatology is nonspecific and consists of goiter or thyroiditis with a sub-acute or chronic course. The treatment is medical and surgical [1]. We report the case of thyroid tuberculosis diagnosed by anatomopathological examination of the surgical specimen in a patient undergoing thyroidectomy for nodular goiter.

### 2. Observation

The patient was 39 years old, without any particular pathological history; she was thyroidectomized for a nodular goiter with a specific tubercular granulomatous reaction on anatomopathological examination (figure 1).

The preoperative thyroid workup was normal; the patient did not report signs of tuberculosis impregnation. The search for an extra-thyroidal localization was negative, and the patient was put on anti-tuberculosis drugs for 6 months after the surgery with a good clinical evolution.

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**Figure 1** Photomicrograph of thyroid parenchyma (upper of the picture) showing epithelioid cell granuloma with Langerhans giant cells (Black arrow) and caseation necrosis (Black Star) suggesting tuberculosis of the thyroid gland. Hematoxylin and eosin stain (x40)

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### 3. Discussion

Thyroid tuberculosis is rare even in endemic areas such as Morocco. Described in the 19th century by Albers, tuberculosis of the thyroid represents 0.1 to 0.4% of all localizations [2]. It is found in 0.6% to 1.15% of cytoponograms performed for thyroid nodules in endemic areas [3,4]. All age groups are affected, the average age being between 30 and 46 years [3,4]. As with other thyroid diseases, the disease is more common in women than in men [4]. Thyroid localization is often secondary and exceptionally primary [5]. It is favored by several factors including: advanced age, diabetes, malnutrition and HIV infection [4]. The association of cancer and tuberculosis of the thyroid is not exceptional [6, 7].

The diagnosis before surgical removal is not easy because of its rarity and its misleading semiological aspect. It is most often an anterior basi-cervical

swelling of progressive onset that may be diffuse or nodular, creating a pseudotumor syndrome [7]. The presence of another concomitant or sequelae tuberculosis focus allows the diagnosis to be suspected. Sometimes, the picture is that of an abscess that fistulates to the skin. The general signs may be absent, in terms of secretion: at the beginning of the evolution, hyperthyroidism may occur following the destruction of the parenchyma and the massive release of thyroid hormones [8]. Subsequently, hypothyroidism may occur due to total destruction of the gland [9]. The main differential diagnosis of this condition is thyroid cancer, as well as other disorders of the gland such as nodular goiter, Graves' disease and thyroiditis. The appearance on imaging is not specific [10], it is the anatomopathological examination that allows to confirm the diagnosis either after a cytopunction or after surgery.

The therapeutic management is medical-surgical [11, 12]. Surgery is always indicated and must be complemented by an anatomical-pathological examination to confirm the diagnosis [11]. The medical treatment is based on anti-tuberculosis drugs, which can be used either in a short regimen of 6 to 9 months or in a classical regimen of 12 months. The risk of relapse or non-cure despite a well conducted treatment is 1%. These failures are due to the appearance of strains resistant to anti-tuberculosis drugs [10].

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### 4. Conclusion

Thyroid localization of tuberculosis is rare, the clinical picture is non-specific, the diagnosis of certainty is histological and/or bacteriological. Its treatment is medico-chirurgical, and its evolution is most often favorable.

## Compliance with ethical standards

### *Acknowledgments*

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### *Disclosure of conflict of interest*

No conflict of interest.

### *Statement of ethical approval*

The present research work does not contain any studies performed on animals/humans subjects by any of the authors.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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