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## Case Report

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## Schwannoma of the thyroid gland: A rare case report

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### Abstract

Schwannoma of the thyroid gland is extremely rare, with little documentation in the English literature. We report a case of 23-year-old female with a thyroid nodule. Ultrasound of the neck revealed a round heterogeneous lesion near the upper pole of right lobe of thyroid and was suggestive of thyroglossal cyst. Fine needle aspiration judged inadequate. Excision of the nodule was undertaken. On histological examination, the nodule was found to be a schwannoma further confirmed by immunohistochemical staining. This case is presented because of its rare occurrence in the thyroid.

**Keywords:** thyroid gland ,schwannoma

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### Introduction

Schwannomas are benign neoplasms of the peripheral nerves originating in the Schwann cells which occur in the head and neck region only in 25% of cases. Primary peripheral nerve sheath tumors commonly arise in the soft tissues of the neck and may secondarily involve the thyroid gland.<sup>[1]</sup>

Primary neural tumors of the thyroid are exceedingly rare and are mainly represented by Schwannomas and malignant peripheral nerve sheath tumors.<sup>[2],[3]</sup>

Schwannoma of the thyroid is extremely rare. Only 18 cases have been described in English literature.<sup>[4],[5]</sup> A case of schwannoma of thyroid gland which simulated a thyroid nodule and discovered after excision of the nodule is reported here.

Its clinical and pathological features are discussed.

### Case Report

A 23 year old female non diabetic, nonhypertensive presented with a history of swelling in front of the neck . Lump was small to start with and gradually progressed in size over the last 1 year.

The patient was otherwise asymptomatic.

On physical examination a painless soft elastic nodule, about 2 cmx2cm with well defined margins, was detected in the right lobe of the thyroid. The left lobe appeared normal.

The nodule was mobile upon swallowing. No cervical nodes were observed. Systemic examination was noncontributory. Her hematological, blood sugar, thyroid, renal, liver and electrolytes profile revealed no abnormality.

Ultra sonogram of the neck revealed

a well-defined round heterogenous lesion measuring 1.6x 1.5x 1.3cm , noted in the anterior cervical triangle close to the midline just superior to the upper pole of right lobe of thyroid deep to strap muscle. A differential diagnosis of thyroglossal duct cyst and dermoid cyst of the neck was made.

US guided Fine Needle Aspiration Cytology (FNAC) of the swelling was inadequate.

Repeated aspiration showed only scanty cellular elements composed of fibroblasts, fibromyxoidstroma in a hemorrhagic background.

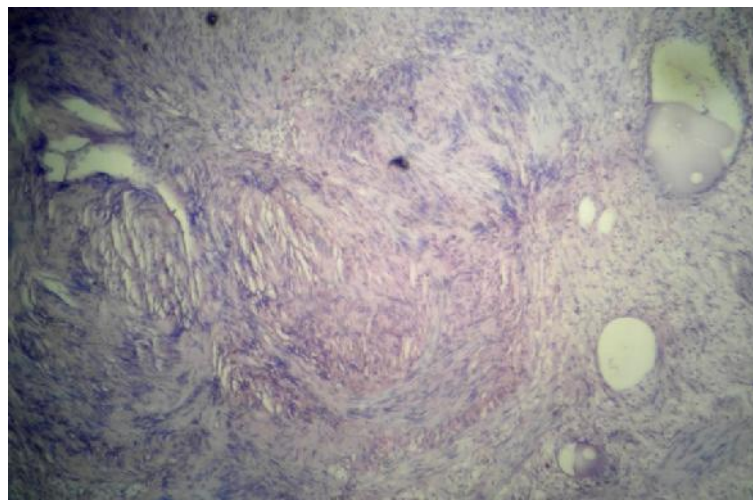
**Macroscopic characteristics**



**Figure 1** showing Gross examination

The excised thyroid tissue measured 2cm x 3cm x 2 cm solid, grey white surface, firm nodular mass[figure1].

**Histology**



**Figure 2** In haematoxylin-eosin stained sections

No confirmatory opinion was given.

The nodule was asymptomatic, increasing in size, but the diagnosis was lacking.

It was decided to carry out excision of the thyroid nodule under general anaesthesia.

During surgery ,a yellowish white lesion 2 x 2cm with regular outline seen in the right lobe of the thyroid.

The post operative course was uneventful.

The neoplastic tissue was circumscribed by a thin fibrous capsule and consisted of spindle-shaped cells arranged in compact spiralling bundles or Verocay bodies. The nuclei were long undulating or comma shaped and often arranged parallel to each other in groups of cells (pallidating).

These agglomerations (Antoni A tissue) alternated with hypocellular myxoid areas, containing (sometimes dilated) blood vessels (Antoni B tissue). Mitotic figures were rare. These characteristics were typical of schwannoma [figure2].

### Immunocytochemistry

Positivity for S-100 protein, revealed by the avidin-biotin-peroxidase technique, was strong and widespread in the neoplastic tissue, confirming the schwannoma diagnosis.

### Discussion

Non-epithelial cancers (neurinoma, teratoma, hemangioma, lipoma, lymphoma, and leiomyoma) occur very rarely in the region of the thyroid.

The first case of schwannoma involving the thyroid gland was reported by Delaney and Fry in 1964<sup>[6]</sup>.

A review of the 18 published cases of thyroid schwannoma showed that they were often mistaken for a thyroid nodule.

The patient reported here presented with a thyroid nodule in the right lobe of thyroid gland which was firm, smooth, painless and mobile on deglutition.

Ultrasonographic evaluation was reported as a thyroglossal cyst or dermoid.

FNAC of the swelling was inadequate.

Though the patient was asymptomatic, it was decided to carry out the excision of the nodule due to the increase in the size of the swelling.

Histopathological examination of the excised specimen revealed a schwannoma of thyroid with Antoni A and B pattern.

This case is being reported here because of its rarity and to highlight the fact that it is extremely difficult to differentiate Schwannoma thyroid from a cystic thyroid nodule since clinical and sonological characteristics can be similar in the two. Only the histopathological examination of the excised specimen could be diagnostic.

### Conclusion

Schwannomas of the thyroid are extremely rare. They are often mistaken for a thyroid nodule.

It is difficult to make diagnosis before surgery and the only treatment for the disease is surgical removal.

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**Conflict of interest:** None declared

### References

1. Aron M, Kapila K, Verma K. Neural tumours of the neck presenting as thyroid nodules: A report of three cases. *Cytopathology* 2005;16:206-9.
2. Badwai RA, Scott-Coombes D. Ancient schwannoma masquerading as a thyroid mass. *Eur J Surg Oncol* 2002;28:88-90.
3. Thompson LD, Wenig BM, Adair CF, Heffess CS. Peripheral nerve sheath tumors of the thyroid gland: A series of four cases and a review of the literature. *Endocr Pathol* 1996;7:309-18.
4. Primary schwannoma of the thyroid gland involving the isthmus: report of a case. Division of general and oncological surgery, Department of oncology, A.O.U. Policlinico "Paolo Giaccone", via del Vespro 129, 90127, Palermo, Italy.
5. Schwannoma of thyroid bed. a case report and considerations on interdisciplinary collaboration. De paoli et al, head and neck surgery division; department of radiology; department of histology and pathology, european institute of oncology, milan, Italy. *Acta otorhinolaryngol* 2005 Aug; 25(4): 250-252.

6.SCHWANNOMA OF THE THYROID GLAND –  
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