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## PRIMARY THYROID HEMANGIOMA, A RARE ENTITY!

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### ABSTRACT

Primary thyroid haemangioma is extremely rare with only a few cases having been reported prior. We are reporting a case of 46-year-old female with history of diffuse thyroid swelling in front of the neck, which was firm to hard in consistency. Ultrasonography (USG) showed an enlarged left thyroid with isoechoic nodule and foci of coarse calcification. Preoperative clinical diagnosis of solitary thyroid nodule was made. Fine Needle Aspiration Cytology (FNAC) was inconclusive, & showed blood. Hemi-thyroidectomy was performed. Haemangioma was diagnosed, based on histopathological examination findings. Surgical excision would be the treatment of choice, which provides a good prognosis.

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## INTRODUCTION

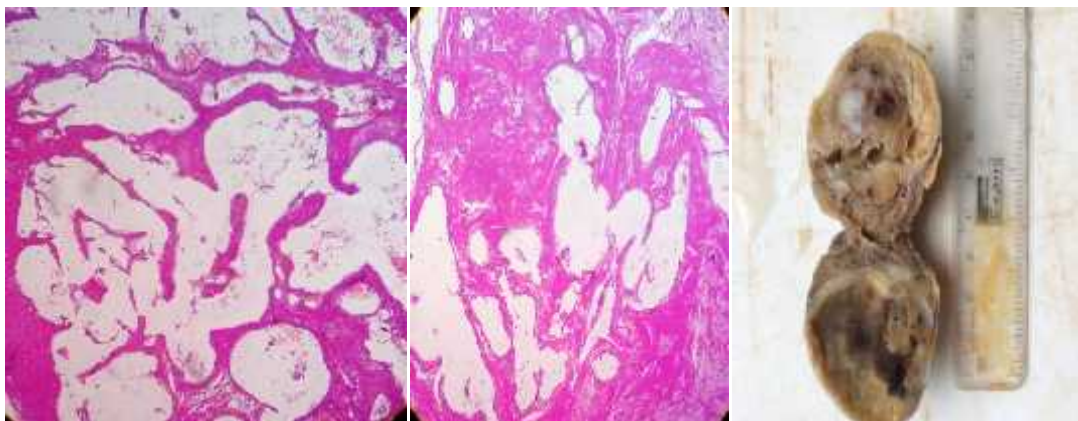
### Case Report

A 46 year old female presented with a history of diffuse thyroid swelling in front of the neck of 2 years duration, which increased to the present size of 5x6x4 cm. There was history of occasional pain over the swelling, no change in voice or dyspnoea. There was no past history of trauma or surgery & previous fine-needle aspiration biopsy. Clinical examination of the neck revealed a mobile, diffuse thyroid swelling which measured about 4 x 5 cm, and was firm to hard in consistency. The patient was euthyroid.

TFT was within normal limits. Haematological and biochemical investigations were also within normal limits.

USG of neck revealed an enlarged thyroid. The left lobe of the thyroid measured 6 x 4 x 7 cm, with a well-defined isoechoic nodule, with foci of coarse calcification. The right lobe was normal. FNAC of the mass was inconclusive, as the aspirate was bloody. Pre-operative clinical diagnosis of solitary thyroid nodule was made.

A left hemi-thyroidectomy was performed, and specimen was sent for histopathological examination.



**Fig 2** Microscopy shows large dilated blood vessels filled with Rbcs ,  
Foci studied showed cholesterol crystals, fibrosis & myxoid areas.  
Grossly lesion was measuring 6x5 cm size with areas of hemorrhage & Fibrosis **Fig 1**

The specimen received was grey brown red, globular, soft tissue mass and measured 5 x 6 x 4 cm. Cut-section revealed a well-encapsulated circumscribed lesion which measured 5 x 4 cm, and consisted of dark brown haemorrhagic areas, with irregular areas of fibrosis, myxoid change, foci of calcification and bone formation [Fig-2]. The surrounding thyroid appeared normal. Microscopic examination revealed thyroid with a well encapsulated lesion, composed of large cavernous vascular spaces, with areas of haemorrhage, fibrosis, hyalinization, calcifications and bone formation [Fig-1]. The surrounding thyroid tissue appeared normal. The final histological diagnosis of cavernous haemangioma of thyroid was made.

## DISCUSSION

Haemangiomas are common benign vascular tumours which are seen in childhood [1]. Primary thyroid haemangiomas are extremely rare and are considered to be a developmental anomaly which results from the inability of the angioblastic mesenchyma in forming canals. They usually follow trauma or FNAC procedure, and arise from vascular proliferations that follow the organization of a haematoma. Haemangiomas should be considered in the diagnosis of any pulsatile mass which involves the thyroid gland [2].

Only 13 cases of primary thyroid haemangiomas have been published in the literature.

Haemangiomas, on USG, show hypoechoic areas with calcifications within the thyroid gland, without specific, distinct characteristics [3]. The clinical finding of the hard nature of mass with associated calcifications, often points to a malignancy. Coarse calcifications, when they are present, are suggested as a reliable sign of the presence of a haemangioma [3]. They may be hard in consistency, due to the presence of phleboliths within the tumour. Though they are unusual, it is often the only reliable sign of a rare haemangioma in the thyroid [1]. Shpitzer et al., have suggested MRI, single photon emission computed tomography (SPECT), digital subtraction angiography (DSA) and red blood cell (RBC) scans for the pre-operative diagnosis of haemangiomas [5]. The presence of heterogenous signal intensity and serpentine pattern on MRI is considered to be highly suggestive of cavernous haemangioma [1].

A Tc-99m erythrocyte blood-pool imaging has been suggested, to confirm diagnosis of haemangiomas [1]. FNAC is essential for the diagnosis of thyroid tumours in most of the cases. However, the specimens of haemangioma will contain only blood components as a feature. Therefore, they will be inconclusive to opine [2].

Surgical treatment is indicated when there is compressive symptoms or a suspicion of malignancy. Hemi-thyroidectomy or total thyroidectomy could be the treatment of choice [4]. To conclude, Primary haemangioma of thyroid is very rare. Pre-operative diagnosis is difficult, as there are no specific pathognomic findings on radiological investigations or FNAC. A differential diagnosis can be considered when the abundant blood flow is aspirated. Surgery is the treatment of choice with a good prognosis. A definitive diagnosis can only be achieved by doing postoperative histopathology examination.

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