

Case Report

Thyroglossal cyst at unusual site: a rare case presentation

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ABSTRACT

Thyroglossal duct cyst is a congenital lesion in the anterior side of neck which results from embryonic remnant of the descending thyroglossal duct. It may get enlarge by infection, inflammation or mucous retention but can be found anywhere in the midline from the base of the tongue to thyroid gland. Most commonly it is present infrahyoid only. In this case, it is present at an unusual site at suprasternal region. A young male presented in the OPD with a single, non-tender swelling in the midline at suprasternal region, almost reaching upto superior mediastinum. After radiological examination and histopathological excision biopsy, it came out to be thyroglossal cyst. No recurrence had occurred.

Keywords: Thyroglossal duct cyst, Suprasternal region, Superior mediastinum

INTRODUCTION

Thyroglossal duct cyst (TDC) is the one of the commonest types of developmental cyst encountered in the neck region. It results from the failure of obliteration of the thyroglossal duct which forms a bridge between the base of the tongue and the thyroid gland. Usually it's a benign swelling but about 1% of the patients suffering from TDC are noted to have an association with malignancy.^{1,2} TDC typically occurs before 20 years of age and a substantial minority of patients over 20 at the time of diagnosis.³ Occurrence in the elderly is rare and only 28% occur over 50 years and 10% over 60 years.^{4,5} Most patients usually presents with a symptomless lump in the neck, which rises on swallowing and protrusion of tongue usually. Infected neck mass is a common presentation in adults.⁶ Sometimes, it may show atypical presentation either clinically or radiologically, which may pose a challenge in making correct diagnosis. Differential diagnosis includes dermoid cyst; branchial cyst; pyramidal lobe hyperplasia; teratoma; hamartoma; lipoma; sebaceous cyst; cavernous hemangioma; lymph nodes, etc.⁷ Wrong diagnosis may leads to incomplete excision and thus

increases the chances of recurrence. Ultrasonographic examination done preoperatively reveals the nature and site of the swelling. Although 85% occur below the hyoid bone, those descending below the thyrohyoid membrane are rare.⁸

CASE REPORT

A 18 years old male patient presented in the ENT OPD of Rao Tula Ram Memorial hospital with chief complaint of a swelling in the anterior side of neck since birth. The swelling was soft, cystic, non-tender in nature and of size of approximately 6×4 cm. It was present in the suprasternal notch, inferiorly reaching 1cm inferior to superior border of manubrium.

It was mobile, non-reducible and not adherent to skin. Radiological examination reveals a space occupying lesion of size 58×42×27 mm in suprasternal notch in midline with no underlying bone erosion and not containing any fat.

Fine needle aspiration cytology was done which shows polymorphs with few lymphocytes and degenerated cells

in proteinaceous background. Patient underwent the excision of the swelling and the specimen was sent for the histopathological examination. Intraoperatively, lot of adhesions was present around the swelling. Inferior extension of the swelling was reaching about 1 cm inferior to superior edge of manubrium. The biopsy report confirms the swelling to be thyroglossal cyst.



Figure 1: Preoperative photograph.

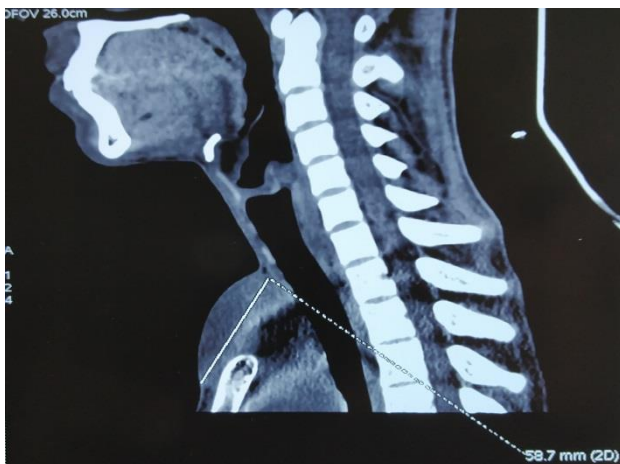


Figure 2: Sagittal section.

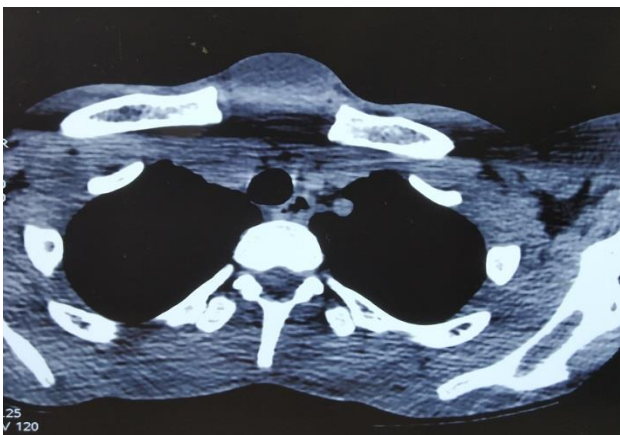


Figure 3: Coronal section.

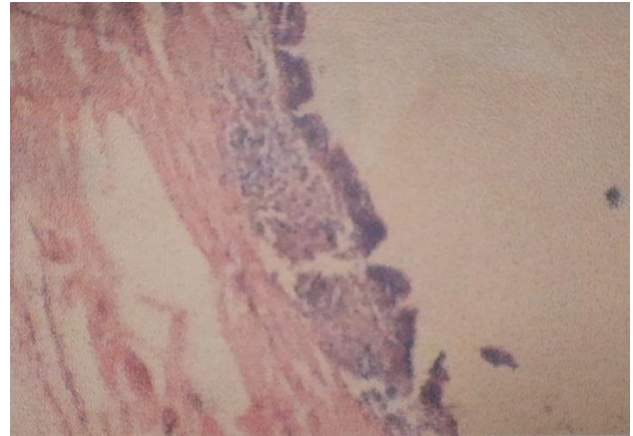


Figure 4: Histopathological picture.

DISCUSSION

TDCs originate from persistent epithelial remnants of the thyroglossal duct that are present during the descent of the thyroid gland from the foramen cecum to its final position in the anterior neck.⁹ By the end of the eighth week the duct usually atrophies and disappears, but persistence of this duct forms the TDC.¹⁰ Only 1% of TDCs are found lateral to the midline, and 80% are juxtaposed to the hyoid bone.¹⁰

Classically, it presents as a midline anterior cervical cyst or mass that moves with deglutition most common being infrahyoid but variations have been documented in the literature. Rarely it may be present intralingually. The low incidence of lingual TGDC may be related to the fact that the duct initially atrophies from the oral side, where thyroid descent first begins. This low incidence makes overall experience with these lesions uncommon.¹¹ Chon et al reported a unique case in that the TDC encroached into the superior mediastinum, descending all the way to the aortic arch.¹² Tas et al had reported an intrahyoid location of TDC.¹³ Sauvageau et al reported a case where the TDC caused severe dyspnoea followed by fatal asphyxia leading to patient's death.¹⁴

Sistrunk's operation is typically the treatment of choice and compared with simple excision of thyroglossal cysts reduces the recurrence rate from 50% to 4%.¹⁵ Although excision of the central portion of the hyoid bone had previously been described by Schlange, it was Sistrunk's addition of further excision of a core of normal tissue above the hyoid bone that was crucial in further reducing the recurrence rate.¹⁶

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