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Case Report

Thyroglossal cyst in elderly: a rare cause of inspiratory stridor

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ABSTRACT

Thyroglossal cyst is the most common congenital anterior neck swelling in childhood. Commonly present as painless swelling in the 2nd decade of life but the cases are reported in the elderly age group also. It represents the persistent epithelial tract from the foramen cecum to the thyroid gland. Clinically can be diagnosed and can be differentiated with other mid-line swelling by movement with the protusion of tongue. It is usually related to the hyoid bone and may be supra-hyoid, infra-hyoid, lower part of the midline or rarely lingual in position. Ultrasonography is the investigation of choice for this cystic condition. It is safe, economical and easily available investigation among all the radiological study. MRI is helpful to diagnose cervical extension and lingual cyst. Inspite of close relation to the laryngeal structure it rarely present as laryngeal mass and causes stridor or sleep apnea as in our case. Classic Sistrunk procedure is the treatment of choice for the condition. Endoscopic CO2 Laser is useful in situation where only intraoral cyst present without cervical extension. Marsupialization is reserved for lingual cyst especially in Neonate. We are reporting this case which was present in the elderly and reported with long standing anterior neck swelling with inspiratory stridor on lying down position.

Keywords: Thyroglossal cyst, Elderly, Inspiratory stridor

INTRODUCTION

Thyroglossal duct cyst (TGDC) usual present in early stage of life with a cosmetic problem. Cyst represents the embryological association of thyroid gland descending from the foramen cecum to the normal position. Any arrest during its descent or its association with Tongue can some time presented with cyst in the anterior part of neck and its association with the hyoid bone.[1] As track regression starts from the tongue side so the extension up to the tongue is rare. It may present as base tongue mass in neonate and rarely in adults. Long standing cases, early exposure to the radiations can convert it to malignancy. Papillary carcinoma is the common malignancy in the TGDC. Surgery is the treatment of choice and marsupialization should be reserve for the neonates. We are reporting this case because of its presentation as a cause of inspiratory stridor with anterior neck swelling and presenting in the later stage of life.

CASE REPORT

A 61 years old male presented with episodes choking sensation in the throat during night since last 6 month. He had a history of slow and progressive swelling in the anterior part of neck since last 2 years. There is no history of Trauma, dysphasia, change of voice, odynophagia and any features of hypo or hyperthyroidism. There is history of loud snoring which is increasing in loudness since last 6-7 month. On clinical examination about 7x6 cm firm swelling present in the anterior part of neck extending from the hyoid bone superiorly to the lower border of thyroid cartilage inferiorly and laterally extending from one sternocleido-mastoid muscle to the other side of the same muscle (Figure 1A). There was a slight movement of the swelling on deglution and protrusion of tongue. On endoscopic laryngeal examination reveals collapse of epiglottis over the larynx by a soft tissue mass. USG neck suggested a well defined cystic lesion with dense low

level echoes within noted in midline at the level of hyoid bone region measuring 6.3x6.0 cm. No vascularity seen on Doppler study, suggestive of benign etiology. CECT neck reveals large well defined cystic lesion of size 7x6cm seen in the anterior neck in the mid-line and para-median region below the hyoid bone and anterior to the Thyroid cartilage. The lesion shows intra-laryngeal extension across the thyro-hyoid membrane with smooth mass affect over supra-glottic soft tissue (Figure 2). Thyroid gland was in the normal position. Scan findings were in favor of thyroglossal duct cyst with intra laryngeal extension. Classical sistrunk operation was done with fibre-optic intubation. Intra-operatively its extension to larynx by pushing the thyro-hyoid membrane was appreciated and cyst was removed en-mass (Figure 1B). Histo-pathology report confirmed the diagnosis of thyro-glossal cyst.

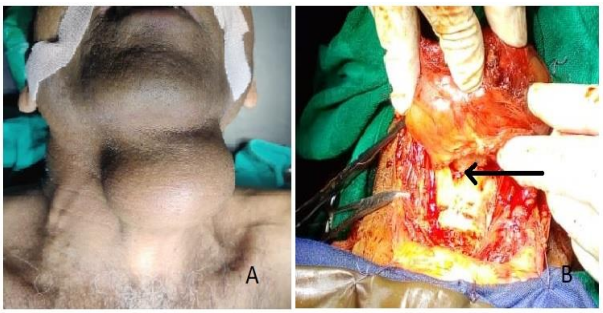

Figure 1: A) Pre-operative image showing extension of cyst, B) intra-operative picture showing extension of cyst in to the larynx through thyrohyoid membrane.

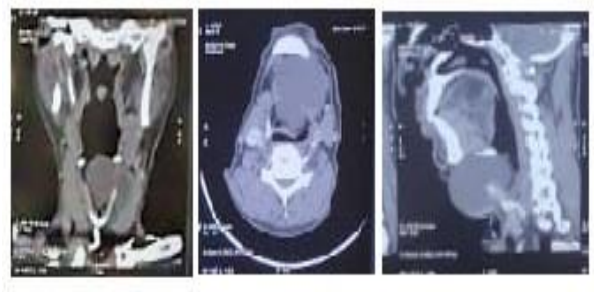

Figure 2: CT images showing cyst bulging in to the larynx in coronal, axial and saggital plane.

DISCUSSION

Thyroid anlage starts at foramen caecum, passes through base of tongue and descends in front, behind or through the hyoid bone to form the thyroid gland. It may contain the only functioning thyroid tissue. Cyst can occur anywhere in the course of descend. It is the most common cause of mid-line swelling in the childhood, but may present at any age.[1] It usually presented as round swelling with an average size of 2x4 cm. Size may increases with Tract Infection. They are rarely reported in 6th or 7th decade of life as in present case.[2] Most commonly they are Infra-hyoid followed by supra-hyoid, supra-sternal or lingual upper respiratory in its location.[3] Clinically they are presented with a swelling in the midline or if infected then may present with discharging sinus. Lump in the throat, dysphasia or sleep apnea is a rare presentation especially lingual thyroglossal cyst. Occasionally cyst may grow towards thyrohyoid membrane and bulges in to the larynx and mimic a laryngeal mass and causes Inspiratory stridor as in our case. Lingual TGDCs are rare. Despite close relation of TGDC to laryngeal structures, a TGDC with intra-laryngeal invasion mimicking an intra-laryngeal mass is an extremely rare condition and only few cases have been reported in the literature as in present case.[4] Symptoms of hoarseness, dyspnea, and dysphasia should make one consider intra-laryngeal extension of TDC. Ultrasonography is the investigation of choice of the condition as the swelling is superficial. It is cost effective along with low radiation and provides the surgeon with the necessary pre-operative information.[5] CT and MRI is rarely required for the cyst. CT shows well circumscribed lesion with smooth margins and rim contrast enhancement. However, meticulous examination of the preoperative MRI is crucial to rule out cervical extension of the cyst or the presence of any caudal ductal remnant that will require combined intraoral and cervical approaches. Although Sistrunk procedure is still the traditional management for TGDC, endoscopic CO2 laser surgery is an alternative for endogenous TGDCs without any projecting neck masses.[6] Some authors believe that simple marsupialization of lingual TGDCs provides excellent and definitive treatment reserving formal sistrunk recurrent cases.

CONCLUSION

Thyroglossal duct cyst should be considered as a rare cause of inspiratory stridor and sleep apnea specially in elderly patients. Long standing anterior neck swelling in the inrfa-hyoid location along with intra-laryngeal extension should raised a suspicion of thyroglossal duct cyst. Long standing ignorance to any neck swelling can lead to the disastrous outcome specially in elderly.

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