Thyroglossal Duct Cyst.

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ABSTRACT

Thyroglossal duct cyst most common congenital malformation of the neck is formed due to failure of involution of the thyroglossal duct. We present a case of six-year-old female child who presented with a history of swelling since one year in the front of the neck in the midline. The swelling was painful, associated with high fever with purulent discharge off and on. The swelling was present in front of neck and moved with deglutition. There was no history of dyspnoea or dysphagia. Diagnosis of Thyroglossal Cyst was made clinically which was confirmed on Ultrasonography. All investigations, including thyroid profile were normal. Sistrunk's procedure (complete excision of cyst with tract and part of middle of body of hyoid bone) was performed under GA with no post-operative complication.

Keywords: Thyroglossal cyst, Sistrunk's procedure.

INTRODUCTION

Thyroglossal tract arises from the site of tuberculum impar and descends in the neck to form the thyroid gland at its terminal part. Any part of the tract may persist and this results in the formation of thyroglossal duct cyst.[1] Thyroglossal duct cyst typically occurs before 20 years of age and a substantial minority of patients over 20 years at the time of diagnosis.[2] Occurrence in the elderly is rare and only 28% occur over 50 years and 10% over 60 years.[3,4] Most patients presents with a symptomless lump in the neck, which moved on swallowing and protrusion of tongue usually 1-3 cm in diameter in the midline below the hyoid bone. Infected neck mass is a common presentation is adults.[5] Differential diagnosis includes Dermoid cyst; branchial cyst; pyramidal lobe hyperplasia; teratoma; hamartoma; lipoma; sebaceous cyst; lymph nodes, etc.[6] Thyroglossal cyst, if not considered as a differential diagnosis in cystic neck swelling may results in incomplete excision and recurrence.[7]

Neck ultrasound is the most common pre-operative diagnostic procedure along with thyroid profile.[8]

Treatment is Sistrunk's operation described in 1920. This includes excision of the tract running from the cyst to the foramen caecum along with the part of the body of hyoid with which the tract is intimately related. Indications for surgery include cosmetic; malignant degeneration; recurrent infection and rarely intermittent upper airway obstruction.[1,7,9]

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CASE REPORT

We present a case of six-year-old female child who presented with a painful swelling at anterior neck in midline. The swelling had been there since almost a year. History of pus oozing out from the swelling with on & off high fever was present. There was no history of dyspnoea or dysphagia.

On Physical examination; A fluctuant swelling seen in the midline, mildly tender to touch and Calor, Rubor, Dolor noted. No significant cervical lymphadenopathy seen. No fever. No cyanosis. No clubbing. No hepatosplenomegaly was present. Swelling moved on deglutition and protrusion of tongue.

Investigations:

Hb: 11.6 gm%, TLC: 7400/cumm, DLC: P: 52% L:42% M:04% E:02%, Platelets : 2.74/ cu mm RBC: 4.66 mill/cumm, HCT: 32.0%, MCV: 68.7 fL, MCH: 24.9 pg, MCHC: 36.3 g/dL, BT: 3 min 15 sec, CT: 5 min 30 sec.

Ultrasound Neck revealed a hypoechoic lesion measuring 10 X 3 mm size in right paramedian location of anterior neck - thyroglossal cyst. Both lobes of thyroid and isthmus were normal in size, outline and echotexture with no Space occupying lesion. No significant cervical lymphadenopathy was present.

Diagnosis of Thyroglossal Cyst was made on the basis of clinical examination and ultrasonography.

Sis trunk's procedure was performed under General Anaesthesia with removal of thyroglossal duct cyst and entire tract up to base of tongue with removal of mid part of hyoid bone. No immediate or delayed complication occurred. Patient was followed up in the post-operative period for 6 months. There was no late complication like fistula or recurrence of swelling.

DISCUSSION

Thyroid gland during organogenesis descends from its site of origin at base of tongue to its final location along a tract, the thyroglossal tract. The tract involutes or atrophies but in some cases failure of involution forms a persistent thyroglossal duct. Associated fibrous cyst formation anywhere along the tract can occur from foramen caecum till thyroid resulting in thyroglossal duct cyst formation. It is the most common congenital neck mass and second most common benign neck lesion. Apart from visible swelling, recurrent infections are common cause of morbidity and leading presentation in ENT OPD or pediatrics wards. In a study by Ren *et al*. it was observed that the incidence of thyroglossal duct cyst was equal in males and females and had a bimodal distribution with similar incidence in children and adults.[11]Thyroglossal duct cysts that occur of the midline may be difficult to differentiate from branchial cleft cyst, an important factor in surgical excision.[12]

Failure to recognize this congenital malformation and inadvertent draining the simple infected cyst leads to thyroglossal fistula formation, which is a dreaded complication of the lesion & is notorious for recurrence. Adequate excision of the cyst with complete excision of tract up to the foramen caecum is necessary to prevent/minimize chances of recurrence.

CONCLUSION

Thyroglossal duct cyst is a common cystic lesion of the neck in the paediatric age. It can sometimes unusually presents as cystic swelling in the neck in adult age group. Even when there is no conclusive evidence of thyroglossal cyst on investigation, it is still wise to keep this as differential diagnosis and treat accordingly with a Sistrunk's operation in order to ensure complete excision of the tract and reducing the incidence of recurrence.

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