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THYROGLOSSAL CYST COEXISTING WITH A FISTULOUS TRACT : A RARE CASE REPORT.

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ABSTRACT

A 16 year boy was admitted to the hospital complaining of odorous discharge from an opening in the anterior region of the left side of his neck. During physical examinations, we understood that his cyst moved with deglutition and protrusion of the tongue. In order to get a correct diagnosis Ultrasound Neck and CT neck was done. By information obtained of physical examinations and his neck radiographs, thyroglossal duct cyst coexisting with a fistulous tract was diagnosed. In adolescents and adults, thyroglossal duct cyst is one the most common causes of midline congenital cyst formation in the neck that may appear anywhere between the base of the tongue and the suprasternal region. Thyroglossal duct cyst develops from a persistence of any portion of the thyroglossal tract in the embryonic period. After birthday, infection of cyst can sometimes lead to fistula formation in the neck. Both of them, thyroglossal duct cyst and thyroglossal fistula, are usually diagnosed by imaging techniques. Sistrunk surgery was done which involves complete excision of cyst and fistulous tract along with the central part of hyoid bone.

INTRODUCTION :

Thyroglossal duct cyst is one of the most common lesions in the midline of the neck and is found in around 7% of the population. The majority of thyroglossal duct cysts are diagnosed during the first decade of life, and over two thirds of the anomalies are diagnosed within the first 30 years of life creating a common encounter for the pediatric surgeon. Thyroglossal duct cysts may occur anywhere along the migratory path of the thyroid, although 80% are found in juxtaposition to the hyoid bone. Painless mass that moves with swallowing due to its remnant connection to the base of the tongue. They are usually asymptomatic but occasionally become infected by oral bacteria. Thyroglossal duct sinuses result from infection of the cyst secondary to spontaneous or surgical drainage of the cyst and are accompanied by minor inflammation of the surrounding skin. Thyroglossal fistula is an extremely rare condition and here we describe one such condition.

Case Report:

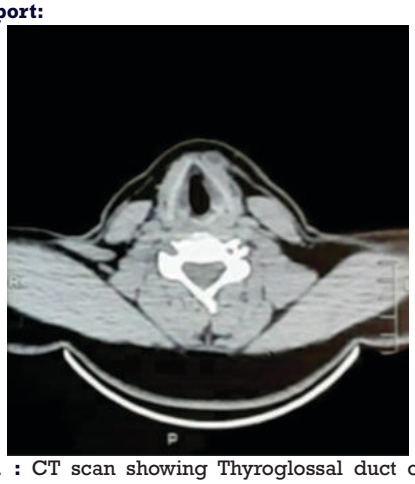

Figure 1 : CT scan showing Thyroglossal duct cyst with fistulous tract.

A 16 year old male presented with an odourous discharge from an orifice on his neck. The patient presented with an opening located at the left lower anterior border of the sternocleidomastoid muscle for two years and also occasional slight pain. In Physical examination , no swelling around the orifice and no signs of cervical lymphadenopathy observed. The fistula moved with deglutition and protrusion of tongue. According to these findings by physical examination the diagnosis of thyroglossal duct cyst with a fistulous tract that communicates the TGDC to the surface of the neck was made. Neck imaging by Ultrasound neck and CT Neck was done which showed an 2.84 cm length cystic structure noted in subcutaneous plane in left cervical region with external opening above left thyroid lobe with possibility of thyroglossal fistula.

Figure 2 : CT scan showing Thyroglossal duct cyst.

Intraoperative Findings:

Sistrunk procedure was done.

Preoperative antibiotics was done covering skin and oral flora.

Transverse incision is made in the skin overlying the cyst. The cyst is exposed by dissecting meticulously around the capsule with electrocautery. Dissection is carried cephalad along the tissue surrounding the duct, including any accessory ducts thus minimizing the likelihood of recurrence, until the hyoid bone is reached. Hyoid bone is transacted to remove a 1 to 1.5 cm segment of the central portion of the bone containing the duct. The dissection continues cephalad to the base of the tract at the floor of the mouth. The duct and surrounding tissues are suture-ligated and divided at the foramen cecum and specien removed.

Figure 3 : Sistrunk procedure done.

Figure 4: Thyroglossal fistula resected specimen

Post Operative Histopathological Examination:

- The cystic structure shows cyst wall lined by pesudostratified ciliated columnar epithelium , also seen in the adjoining fragments a foci of inflammatory granulation tissue.
- Bone studied showed mature bony trabeculae with intervening by marrow spaces .
- Suggestive of Thyroglossal Cyst coexisting with fistulous tract.

DISCUSSION:

Thyroglossal duct cyst results from remnant structure of the median thyroid anlage as it descends to a caudad position during the 3rd gestational week to fuse with the lateral thyroid anlage. During its descent into the neck, it passes most commonly through the hyoid bone process as it develops from the second branchial arch, and this represents a key factor during surgical resection. The thyroid diverticulum develops at the foramen cecum and remains connected to it as it descends. During weeks 4 to 8 of gestation, the thyroid gland develops and finds its final position in the neck, and it is by this time that the thyroglossal duct and its connection to the tongue usually obliterate. When there is lack of obliteration of these structures, an abnormal cystic structure can be located anywhere along its migratory course. It is rarely infected by oral microorganisms and forms a fistulous tract with the overlying skin. The classic finding of this lesion is a midline structure at or just below the level of the thyroid. Diagnosis is by Fistulogram . CT and MRI are also used. Sistrunk procedure is the procedure of choice. Importantly, the presence of normal thyroid gland apart from the cystic structure must be confirmed, either by physical examination or by ultrasound study. The incidence of ectopic thyroid tissue near the duct ranges from 10% to 40%. Less than 1% risk of developing malignancy within the cyst. Sistrunk procedure has a recurrence rate of less than 5%.

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