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Case Report

Thyroglossal Duct Cyst and Sistrunk Procedure - Case Report

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ABSTRACT

Thyroglossal duct cyst is the most common congenital neck malformation that occurs due to failure in the closure of the thyroglossal duct. The authors present a case of a 57-year-old caucasian male patient who complained of anterior cervical mass that had been slowly growing for eight years. After further investigation, he was diagnosed with a thyroglossal duct cyst. A Sistrunk procedure was performed with satisfactory results.

ABBREVIATIONS

CT: Computed Tomography; MRI: Magnetic Resonance Imaging

INTRODUCTION

The thyroid gland begins its embryological development in the third gestation week, migrating from the cecum foramen in the tongue base to its definitive position in the inferior pre-tracheal neck. The thyroid gland remains in contact with the tongue base through a tract, the thyroglossal tract, until the end of the embryogenesis when it normally involutes and closes. If any portion of the duct persists, secretion of the epithelial lining can result in inflammation and thyroglossal duct cyst formation [1]. It is the most common congenital cervical anomaly with a 7% population prevalence, often occurring in pediatric patients [2].

CASE REPORT

The authors present a case of a 57-year-old caucasianmale patient referred to our Department with an anterior cervical mass. The patient's main complaint was aesthetics. He had no pain but reported that the mass had been slowly growing for eight years. Clinical examination confirmed a cystic, non-tender, moving with swallowing submental swelling with 6-7 cm of major diameter (Figure 1).

He initially performed a neck ultrasound that revealed a thyroglossal duct cyst with 55 mm and a normal thyroid gland. The cytological study showed foam cells and inflammatory cells, with no signs of malignancy. To further delineate the lesion, a CT scan was performed anda non-complicated cystic mass with 54x47 mm (Figure 2) was described. We performed surgical excision of the cyst, tract and central part of hyoid bone (Sistrunk procedure – (Figure 3,4). The specimen was sent for histopathological evaluation that showed a cystic lesion with a stripped epithelium layer in its fibrotic capsule (Figure 5).

DISCUSSION AND CONCLUSION

Persistence of non-obliterated thyroglossal duct culminates in the formation of a Thyroglossal Cyst. It can develop anywhere along the path of the thyroglossal duct,

including within the hyoid bone, the tongue and the floor of the mouth. However, the subhyoid location has been reported as the most common in most studies [1,3,4]. Typically, the clinical presentation consists in the presence of a painless, mobile, non-tender midline neck mass near to the hyoid bone [1,3]. In some cases, patients report pain due to infection, dysphagia, globus sensation, cough or airways obstruction [3]. The diagnosis is achieved by performing a careful evaluation of symptoms along with diagnostic testing. A full head and neck and oral examination should be performed.

Ultrasound is the ideal initial imaging of choice and the CT scan and MRI can be used to evaluate the Thyroglossal duct cyst and the presence of normal thyroid tissue [1]. The standard treatment for these patients is surgery. It is almost always recommended to prevent recurrent infections [2,3]. The simple excision of the duct cyst has high recurrence rates (45-55%) [2]. However, Sistrunk described a radical excision that is currently the standard care of this condition. It consists in the resection of the central third of the hyoid bone and a core of the tongue tissue. It should not be performed in the presence of acute infection [2,4].

Possible complications include laryngotracheal injury, hypoglossal nerve injury, wound infection (4%), seroma, hematoma, recurrence of the cyst (3-5%) and salivary fistula [4]. The patient had a post-operative period with no complications and resumed his normal life. There is no evidence of recurrence after 17 months of follow-up.

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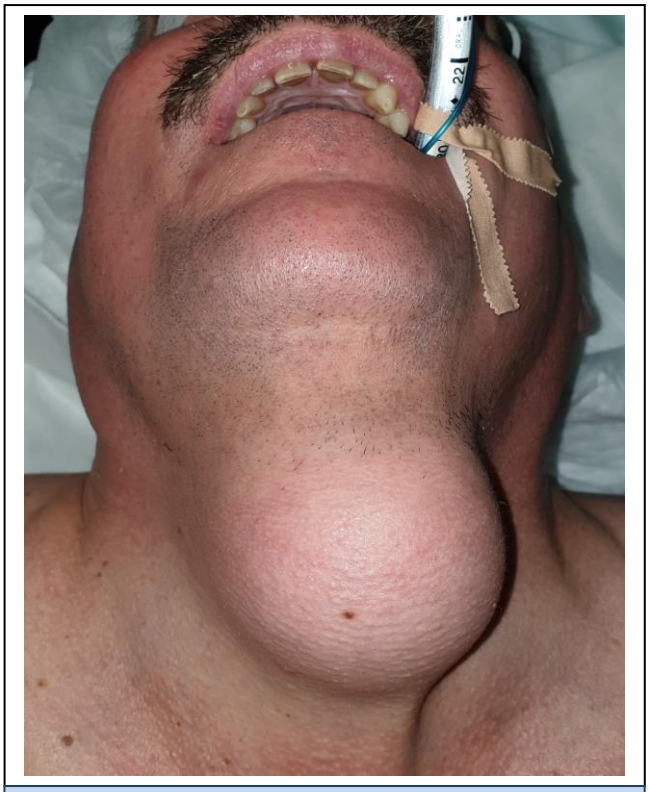


Figure 1

Figure 2

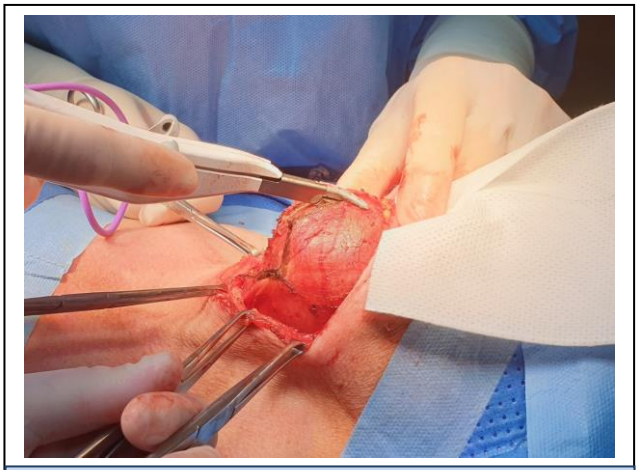
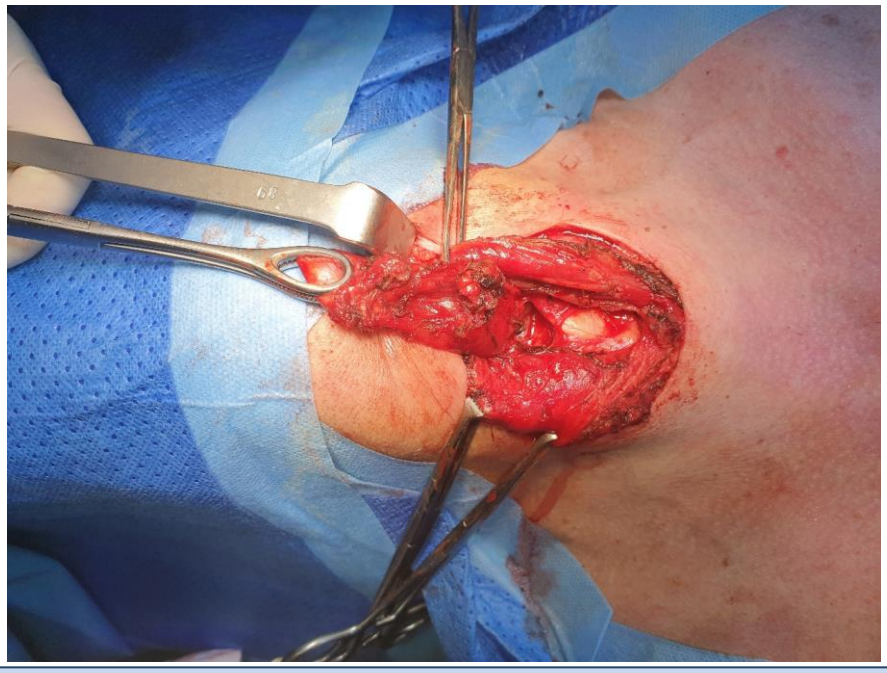


Figure 3



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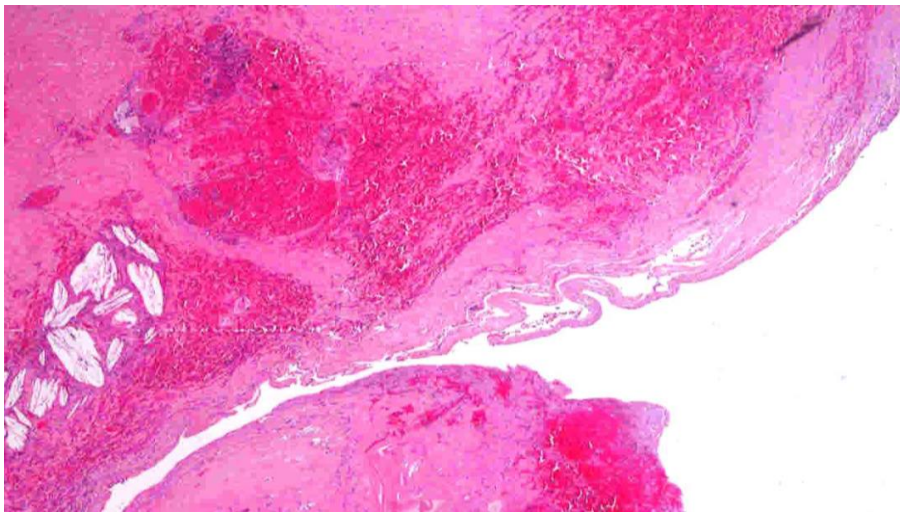

Figure 5