



Diagnostic Dilemma of Midline Neck Swelling in an Elderly Patient – Case Report

Payal Kamble¹, Diksha Rani^{1*}, Varad Wazarkar¹ and Rajeev Gurmukhi²

¹ENT Department, ESI Mahatma Gandhi Memorial Hospital, Mumbai, Maharashtra, India

²SURGERY Department, ESI Mahatma Gandhi Memorial Hospital, Mumbai, Maharashtra, India

*Corresponding Author: Diksha Rani, ENT Department, ESI Mahatma Gandhi Memorial Hospital, Mumbai, Maharashtra, India.

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Abstract

A thyroglossal duct cyst occurs as result of failure of obliteration of thyroglossal tract during fetal development. It generally presents in the age of infant and adolescents. Rarely it presents in the elderly group. In the present study 60 year old female presented with painless neck mass from last 1 year which was slowly increasing in size. Laboratory investigations showed all routines were within normal limits. Ultrasonography revealed paramidline cystic lesion but computed tomography was more suggestive of thyroid nodule. Based on the clinical diagnosis, we did sistrunk procedure and specimen was sent for histopathology examination and it revealed thyroglossal duct cyst with heteropic thyroid tissue. So it is essential to keep the thyroglossal duct cyst as differential diagnosis in midline neck swellings even in elderly patients.

Keywords: Thyroglossal Duct Cyst; Sistrunk Procedure; Elderly; Midline Swelling; Case Report

Introduction

Thyroglossal duct cyst is the most prevalent congenital midline swelling of the neck which is caused by a persisting embryonic thyroglossal duct [1]. During the normal development, thyroid gland descends from tongue to anterior neck in relation to trachea and laryngeal cartilage. During its migration, it remains attached to tongue with the help of thyroglossal duct which gets absorbed at 10th week of gestation. Incomplete obliteration leads to development of thyroglossal duct cyst. The prevalence of the cyst in the population is 7% [2]. They generally present in infants or adolescents but since they are frequently asymptomatic, some individuals are diagnosed with this defect at age 20 years or older. Both the sexes are equally affected [3]. It presents as midline swelling that moves with protrusion of tongue. It may present with a complication of infection or fistula formation to the skin if surgically drained. Sistrunk operation is the standard operation which consists of removal of thyroglossal duct a portion of hyoid bone, a portion of the raphe joining of raphe joining the mylohyoid muscles,

a portion of each genioglossus muscle and the foramen caecum. Chances of cyst to be malignant is 1% in elderly [4,5]. We are hereby reporting such rare case presenting in old age.

Case Report

A 60 year old female patient reported to ENT department with complaint of swelling in the neck from last 1 year. The swelling was slowly increasing in size. No history of dysphagia, hoarseness of voice or shortness of breath. She had no history of radiation exposure and no personal or family history of thyroid cancer and no history of hypothyroidism or hyperthyroidism. Her past history was unremarkable.

On examination, swelling was in midline in the infrahyoid region, approximately 2*2 cm in size, moved with tongue protrusion and no skin changes. It was soft, not tender, no local raise of temperature, not fixed to skin. Thyroid examination was normal. No lymph nodes were palpable.

Laboratory investigation for thyroid function showed euthyroid state. Ultrasonography showed 1.6*0.9*2.1 cm size solid cystic lesion seen in right paramedian position. It shows minimal vascularity. Fine needle aspiration cytology (FNAC) was performed and it showed benign cystic lesion. Computed tomography (CT) scan showed paramidline infra-hyoid nodule juxtaposed with the isthmus of the thyroid gland was highly suggestive of a thyroid nodule.

Based on history and examination, a clinical diagnosis of thyroglossal cyst was made and patient was planned for excision of cyst.

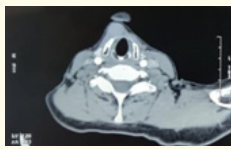


Image 1: Computed Tomography Scan showing well defined right paramidline infra-hyoid nodule contiguous with the isthmus of the thyroid gland highly suggestive of thyroid nodule.

Intraoperative findings

Sistrunk operation was performed. Cystic swelling was seen in the midline infrahyoid region, superiorly the tract was seen inferior to hyoid bone up to base of tongue and inferiorly it was seen in continuation with pyramidal lobe. It was not adherent to surrounding areas and had well defined margins Thyroglossal cyst was removed along with the central piece of hyoid bone, cuff of tissue around base of tongue with pyramidal lobe of thyroid in toto and was sent for histopathology examination. Pathologic evaluation revealed non keratinising lined epithelium cyst along with hetropic thyroid tissue.

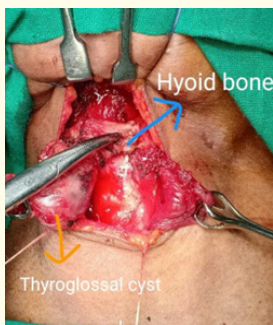


Image 2: Intraoperative picture showing thyroglossal cyst pedicled to hyoid bone

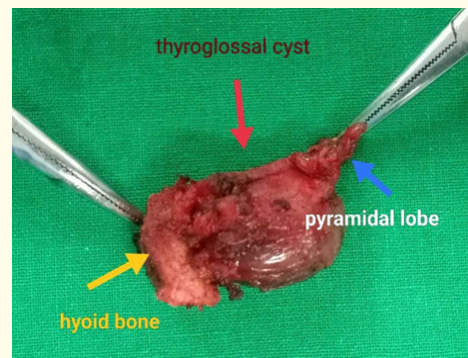


Image 3: Operative specimen showing the thyroglossal duct cyst (red arrow), hyoid bone (yellow arrow) and pyramidal lobe (blue arrow).

Discussion

Thyroglossal duct cysts are the most common congenital neck masses, accounting for as many as 70% of all congenital neck anomalies [6]. It is the most commonly found congenital anomaly of the neck in children aged less than 5 years old. An estimate of up to 60% of cases is found in children aged less than 5 years old, but almost one-third of cases can appear in patients aged 20 years and older [7]. In our case, this patient belonged in one-third with an age of 60 years. Women are more likely to have this lesion as compared to men, with a ratio of 3:2. The most common presenting chief complaint is asymptomatic neck mass, sometimes pain and dysphagia [7]. In our case, patient presented with asymptomatic swelling. Differential diagnosis include branchial cyst, lipoma, sebaceous cyst, lymph node enlargement and metastasis of thyroid carcinoma.

Patient was advised ultrasound. Normally sonographic appearance of thyroglossal duct cyst was round or oval anechoic cyst that was well circumscribed, with posterior acoustic enhancement [8]. Ultrasound had an impression of solid cystic component which further increased diagnostic dilemma. So we planned for FNAC and it showed benign cystic lesion. We further did CT to confirm the diagnosis and it had an impression of nodule with no invasion of capsule and no features of malignancy. A conclusion was drawn from clinical examination and investigation and diagnosis of thyroglossal cyst was made and patient was planned for sistrunk operation.

Sistrunk operation was performed and another unusual finding seen swelling was in continuation of pyramidal lobe. Thyroglos-

sal cyst can be found in the suprasternal region (7%), within the tongue (3%), within the thyroid itself (1%) but in our case it was in continuation with pyramidal lobe [7]. With histopathology evaluation, diagnosis was confirmed. On follow up, the patient had no recurrence and was symptom free.

Conclusion

Thyroglossal duct cyst can occur at any age but it should be kept as differential diagnosis in midline swellings in the elderly population. It is necessary to rule out carcinomatous changes in this age group by histopathology examination.

Conflict of Interest

The author declares that there are no conflicts of interest regarding the publication of this article.

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