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Case Report

Atypical presentation of thyroglossal cyst

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ABSTRACT

A thyroglossal duct cyst is a congenital anomaly that traditionally presents with a swelling in the anterior part of the neck with a tract extending behind the hyoid bone, which moves with tongue protrusion. But here we received a patient with atypical features, confusing whether it's a dermoid cyst or a lymphatic cyst, as radiological features suggested no tract was found.

Keywords: Thyroglossal cyst, Congenital anomalies, Thyroid gland

INTRODUCTION

A swelling is a protrusion outside the human body, which is easily visible, whereas a lump is a vague mass that can be palpated. When a patient presents with a swelling in the anterior part of the neck, it is examined clinically by various differentiating factors like midline (Thyroid swellings, lymphadenitis, abscess, lymphoma, sebaceous cyst, salivary gland tumours etc.,) and para median swelling like thyroglossal cyst, whether is moves with protrusion of tongue like thyroglossal cyst or with deglutition namely thyroid swellings, movement of neck etc. Usually, a staged triple assessment, like clinical, radiological, and histopathological, if needed, additional biochemical or microbiological investigations are done.[1] Congenital anomalies and atypical presentation are reported in many cases. Atypical presentation of thyroglossal cysts in different locations with different properties has been reported over the years by various doctors.

CASE REPORT

Here is one such scenario where a 38-year-old female came to the general surgery OPD with complaints of swelling in the anterior inferior part of the neck for 3 months. The patient was normal before 3 months, after which she noticed swelling in the anterior part of the neck, which was insidious in onset and progressively increasing in size. The swelling was not associated with pain or fever. It does not move with deglutition and protrusion of the tongue. There was no history suggestive of pressure symptoms. The clinical examination was confined to a routine swelling presenting in the midline, which could even be a dermoid cyst.

Routine blood investigations were within normal limits, and her thyroid profile was normal. Ultrasound abdomen showed a well-defined lobulated cystic lesion measuring 3.8×3.1×2.1 with low-level internal echoes and internal septation noted in the suprasternal notch, likely a thyroglossal cyst. the atypical presentation to be noted here is that no obvious tract was found or any extension behind the hyoid bone. FNAC was performed, and the centrifuged fluid revealed predominantly cystic macrophages, degenerating squamous epithelial cells, polymorphs, a few lymphocytes, and karyorrhectic debris. There is no evidence of atypical cells. Impression showing features of a benign cyst.

Hence patient was planned for a step ladder incision and radical excision of the cyst. Intraoperatively size mentioned earlier, a well-defined cyst was excised. However, no obvious tract was found. The content drained was a glairy serous/mucous fluid.

Histopathological studies showed a cyst wall of fibrocollagenous tissue lined by pseudostratified ciliated columnar epithelium, having ulceration and denudation. The subepithelial layer shows granulation tissue with areas of chronic inflammatory infiltrate and lymphoid aggregates. Focal mucous glands (A1), skeletal muscle fibres, and congested vessels are seen. Thyroid tissue is not detected in the sections studied.

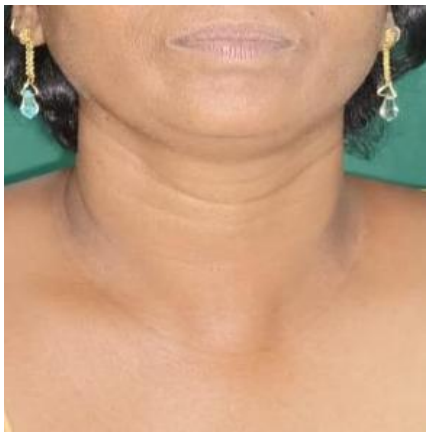

Figure 1: Clinical picture: swelling anterior part of neck.

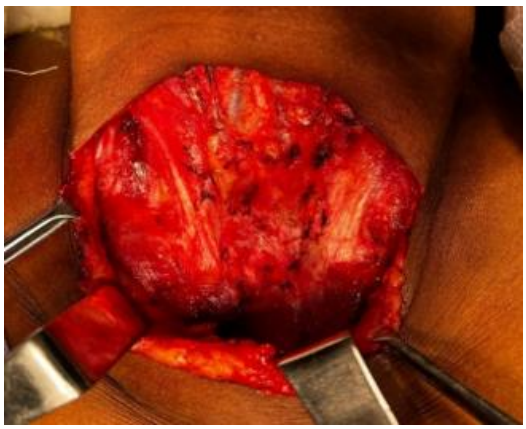

Figure 2: Intra-operative picture.

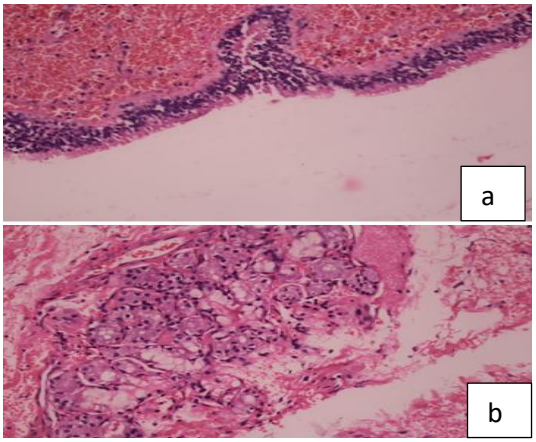

Figure 3 (a and b): histopathology- lining epithelium.

DISCUSSION

The thyroid gland arises from the foramen caecum at the base of the junction of the anterior two-thirds and posterior one-third of the tongue and forms a ventral diverticulum (median thyroid analogue) which descends downward with a patent connection with the foramen caecum.[5] The thyroid glands form around the 5th week and descend around the 8th week.[6]

The hyoid bone forms from the 2nd brachial arch simultaneously, hence the thyroglossal duct takes an anterior or posterior course to the hyoid bone and descends downwards. However, the duct disappears once the thyroid gland reaches its desired position. A thyroglossal cyst is a congenital anomaly that traditionally presents with a swelling in the anterior part of the neck that moves with deglutition and protrusion of the tongue. The thyroglossal cyst opens internally at the Foramen caecum.[1] The Thyroid gland arises from the foramen caecum in the junction of the anterior two-thirds and posterior one-third at the base of the tongue, descends downwards, crosses the hyoid bone dorsally, and ends up inferiorly in its desired position. The pathway the thyroid gland travels forms the thyroglossal duct. The thyroglossal duct opens internally at the Foramen caecum[1]and it usually disappears in development. Persistent pathway or when the opening of the foramen caecum gets blocked, it forms a cyst, which is called thyroglossal cyst. This cyst is usually in the midline, and it slowly grows with or without infection.

Around 7% of the population have these, and two-thirds of the cysts present in the first three decades of life, with a peak in the adolescent age group.[2] The thyroglossal cysts account for 70 % of total neck congenital abnormalities, and 90 % of them are situated in the midline.[3] It remains silent in early life, and most of them present in an infected form. The entire tract will be visible only when the hyoid bone is removed hence, traditional treatment is Sistrunk surgery.[1]

The existence of a thyroglossal cyst is always indicated by the foramen caecum and the pyramidal lobe of the thyroid gland. The thyroglossal cyst mostly appears around the thyroid gland. But about 12% occurs in the suprasternal notch. When left untreated patient presents with an infected thyroglossal cyst, which is always challenging in treatment, the incision and drainage will always end up in sinus formation. Hence in the traditional Sistrunk surgery procedure, the hyoid bone is dissected for complete excision of the thyroglossal cyst

One of the major concerns here is over the years, in some rare cases, papillary carcinoma arising from the thyroglossal cyst has been reported, for which most cases FNAC rarely helped in identifying.[7] Hence, the alternate option would be to send a Frozen section if a solid lesion was palpable intraoperatively. if it is identified to be papillary carcinoma, it is best to remove the thyroid gland along with the cyst.

Dermoid cyst is the most common differential diagnosis of swelling present in the Midline.[8] Undescended thymic gland is another condition to be ruled out, and it can present with stridor.[9,10] Swelling presenting in the anterior aspect neck can also be a Lymph node or ectopic thyroid. However, dermoid contains cheesy fluid as content, and the lymph node is soft to firm in consistency, and the thyroid gland moves with deglutition.

CONCLUSION

In atypical presentation just anterior to the suprasternal notch, with no evidence of remnant pathway posterior to the hyoid bone, radical excision can be performed, after ruling out papillary carcinoma through FNAC.

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REFERENCES

1. Sistrunk WE. The surgical treatment of cysts of the thyroglossal tract. Ann Surg 1920;71:121-2.
2. Ewing CA, Kornblut A, Greeley C, Manz H. Presentations of thyroglossal duct cysts in adults. Eur Arch Otorhinolaryngol 1999;256:136-8.
3. Chon SH, Shinn SH, Lee CB, Tae K, Lee YS, Jang SH, et al. Thyroglossal duct cyst within the mediastinum: an extremely unusual location. J Thorac Cardiovasc Surg 2007;133:1671-2.
4. Ward GE, Hendrick JW, Chambers RG. Thyroglossal tract abnormalities, cysts and fistulas; report of 105 cases from the Johns Hopkins Hospital observed during the years 1926 to 1946. Surg Gynecol Obstet 1949;89:727-34.
5. Pueyo C, Royo Y, Maldonado J, Skrabski R, Gris F, Landeyro J, et al. Double cervical cyst derived from a single thyroglossal duct tract. J Pediatr Surg 2008;43:748-50.
6. LaRiviere CA, Waldhausen JHT. Congenital cervical cysts, sinuses, and fistulae in pediatric surgery. Surg Clin North Am 2012;92:583-97.
7. Bishop GL, Jasim S, Strnad BS, Itani M. Papillary thyroid cancer in thyroglossal duct cysts: a pictorial review and case series. Ultrasound Q 2023;39:194-8.
8. Vittore CP, Goldberg KN, McClatchey KD, Hotaling AJ. Cystic mass at the suprasternal notch of a newborn: congenital suprasternal dermoid cyst. Pediatr Radiol 1998;28:984-6.
9. Conwell L, Batch J. Aberrant cervical thymus mimicking a cervical mass. J Paediatr Child Health 2004;40:579-80.
10. Senel S. A reminder on superior herniation of normal mediastinal thymus. Eur J Pediatr 2011;170:675-6.

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