

A Case Report on Submental Dermoid

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Abstract: *This article presents a detailed case report of a 48-year-old female patient with a rare presentation of a dermoid cyst in the midline neck, highlighting the challenges and nuances in diagnosis and management. Despite being commonly misdiagnosed as thyroid tumors, dermoid cysts require specific attention due to their congenital origin, histological composition, and potential for misdiagnosis. Through an exploration of the patient's clinical presentation, diagnostic process, and surgical management via a Sistrunk procedure, this study emphasizes the importance of considering dermoid cysts in differential diagnoses for neck swellings. The findings underscore the critical role of histological examination in confirming the diagnosis and the efficacy of surgical excision in treating these benign yet potentially complicated tumors. The case contributes valuable insights into the surgical approach, potential complications, and the excellent prognosis post-operatively, underscoring the significance of early and accurate diagnosis.*

Keywords: Dermoid cyst, Neck, Sistrunk procedure, Histology, Congenital tumors

1. Introduction

Dermoid cysts are rare, benign congenital tumors that develop due to abnormal fusion of ectodermal and mesodermal cell lines. On histology, these growths are lined by stratified squamous epithelial cells and typically contain adnexal structures including sebaceous glands, sweat glands, and hair follicles, which can help distinguish them from epidermoid cysts. More complex dermoid cysts will also contain cartilage, bone, and fat. Classically, 70% of dermoid cysts are discovered in children 5 years and younger and 1-7% develop in the head and neck area. Most often they are seen in the periorbital, lateral eyebrow location. Other areas of presentation include over the frontal and occipital areas as well as the upper and lower eyelid. Dermoid cysts present less commonly in adults and can easily be overlooked when presenting in an uncommon location such as, in our case, over the midline neck. Standard surgical management is direct or endoscopic simple excision of the dermoid cyst. However, in the case presented, a Sistrunk procedure was performed as suspicion of thyroglossal duct cyst was greater. This involves removal of the mass as well as the middle third of the hyoid bone and a portion of the thyroglossal tract posterosuperior to the hyoid.

2. Case Report

A 48 year old female patient presented with a mid line swelling in the neck for the past 6 years. Patient initially noticed a painless, slow growing swelling in the upper part of neck in the midline, she presented for the cosmetic problem and there were no compression symptoms related to it. There was no history of fever, discharge from the swelling. The patient had regular bowel movements, a normal appetite, slight weight loss, and no Co morbid conditions. The patient was a non smoker and not alcoholic. No significant family history.

On examination a large swelling 6×5×4 cm present in the submental region, surface is smooth, margin are rounded, does not move with deglutition, move with protrusion of tongue, skin over the swelling is normal, not warmth, not tender, tense cystic in consistency, cross fluctuation positive, non transilluminant, easily mobile from side to side, restricted mobility up and down. Cervical nodes are not palpable. Examination of base of tongue is normal.

On further evaluation. CECT neck showed well defined hypodense/ cystic lesion noted in sub mental and sub mandibular region extending to the right side of floor of mouth suggestive of Ranula.

The patient then underwent a fine needle aspiration biopsy of the mass that was negative for malignancy and showed plenty of polymorphs, few lymphocytes few squamous cells in necrotic background suggestive of suppurative lesion.

Management

A Sistrunk procedure was performed for cyst removal as the suspicion for thyroglossal cyst was greater. The procedure went without complications and a gross specimen was submitted to pathology. The final diagnosis made from histology which showed 3.5× 2.5 ×1 cm. unilocular cyst filled with grey brown yellowish material lined by squamous epithelium filled with eosinophilic degenerative material with Keratin flakes and occasional sebaceous glands suggestive of dermoid cyst.

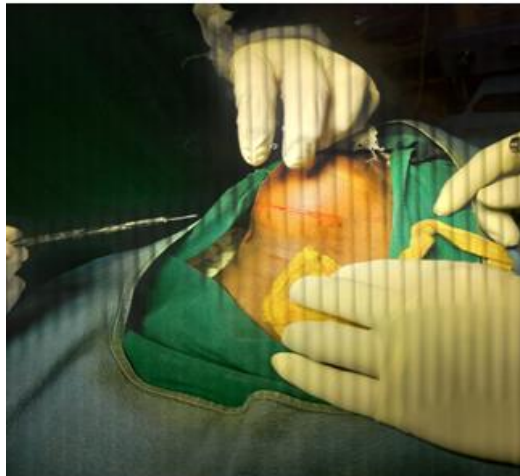
3. Conclusion

Dermoid cyst of the neck is rare and can often be misdiagnosed with thyroid tumors. so that proper investigations can be performed to reach a definitive diagnosis. Surgery is the treatment of choice, especially

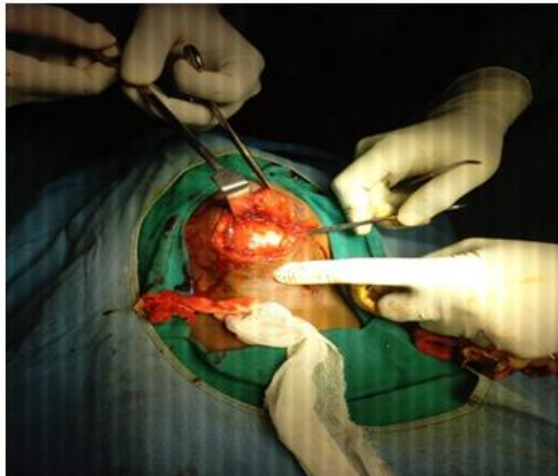
due to possible malignant alterations. However, surgical manipulation has to be delicate, since cyst content, especially if with bacterial infection, may spread to the surrounding tissues and cause severe complications. The chance of malignant degeneration is small and the post operative prognosis is excellent.

References

- [1] Chaudhary P, Mathur NP, Silu M. An unusual dermoid cyst presenting as midline swelling of neck in an adult patient. *International Journal of Otorhinolaryngology and Head and Neck Surgery*. 2022;8(10):844. doi:10.18203/issn.2454-5929.ijohns2022446.
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(a)



(b)



(c)



(d)

(A)-(D) Intraoperative Images

DEPARTMENT OF PATHOLOGY
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Blopsy Number: 1164/23
Name: Chandan Age/Sex: 42/M
Unit/Ward: F-14 OP/IP No: 3009800

REPORT

Clinical Diagnosis: Submental swelling /
? Ranula / Thyroglossal
Cyst

Procedure: Excision and biopsy.

Gross: Received cystic structure
measuring 3.5 x 2.5 x 1 cm
cut surface - umbilicated cyst filled with
greyish yellowish material

Histology: Section studied shows cystic
space lined by squamous epithelium
with extensive ulceration, granulation
tissue and foreign body giant cells.
Cyst is filled with eosinophilic degenerated
material with keratin flakes. There are
occasional sebaceous glands.

Imp: Picture is suggestive of
ulcerated Dermoid cyst

Date: 26/9/23

Prof. *[Signature]* Pathology
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(c) (d)
(C) Excision Biopsy Report (D) Postoperative Image