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Case Report

Goitre impersonator: a case report of a dermoid cyst in the midline of the neck

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ABSTRACT

Dermoid cysts can sometimes be neglected, unless they affect cosmesis or present the fear of turning malignant. We present a case of a dermoid cyst on a patient's neck, neglected initially and finally presenting as a swelling over the patient's neck which appeared as a thyroid swelling at first glance.

Keywords: Dermoid cyst, Midline neck swelling, Otolaryngology

INTRODUCTION

An anterior midline neck swelling can have varied aetiologies; some benign while others malignant. A thyroid gland swelling is seen in the region of the thyroid gland which characteristically moves on swallowing. Similarly, a thyroglossal duct cyst forms along the path of the thyroglossal duct and can move on swallowing as well as on tongue protrusion.[1] Similarly swellings of other aetiologies can also present in the same region causing a diagnostic dilemma.[1] We present one such diagnostic dilemma in this case report.

CASE REPORT

A 40-year-old male patient came to the OPD with complains of a swelling over his anterior neck in the midline. The swelling was noticed incidentally by the patient 6 years ago however was not troublesome to him in any way. The swelling was gradually increasing in size over the years and the patient finally reported to the OPD due to the cosmetic effect of the swelling. The patient did not recollect any history of trauma over the area of the swelling or any pain or pus discharge from the swelling. There was no sudden increase in the size of the swelling.

On examination, there was a single, ovoid swelling around 4×3×2 cm in size over the anterior neck in the midline suprasternal region (Figure 1). There was no local rise of temperature on palpation. It was firm in consistency, mobile, non-indurated and not adherent to the surrounding structures. There was no tenderness on palpation, it did not move with swallowing or tongue protrusion and the skin over swelling was normal with no pus point or scarring over the skin.

The patient was asked to do an ultrasonography (USG) of the swelling which showed a 4x2.3x4.1 cm well defined heterogenous hyperechoic lesion with no internal vascularity and was reported as an dermoid cyst. Excision of the cyst was planned and for further delineation of the extension of the swelling a CT scan was done.

The report mentioned a thick walled, encapsulated cyst in the subcutaneous plane most likely being an dermoid cyst. The CT further mentioned that the cyst was causing splaying of the strap muscles and lying antero-inferior to the thyroid gland (Figure 2).

Excision was the cyst was carried out under general anaesthesia (Figure 3 and 4) The cyst was removed in

toto (Figure 5) and sent for histopathological examination.

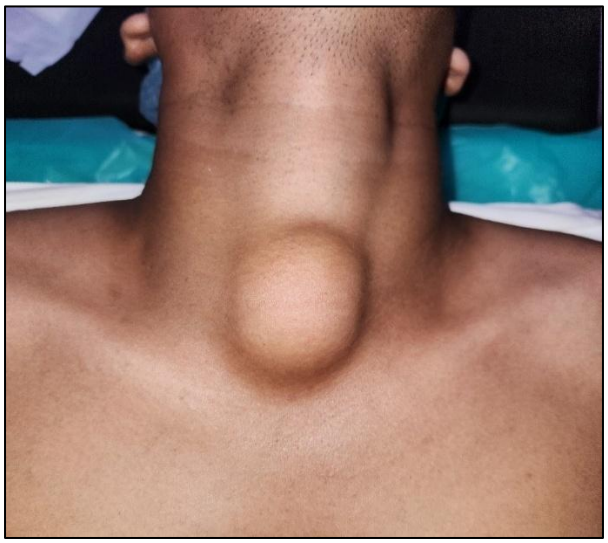

Figure 1: Midline neck swelling.

Figure 2: CT scan images of the cyst.

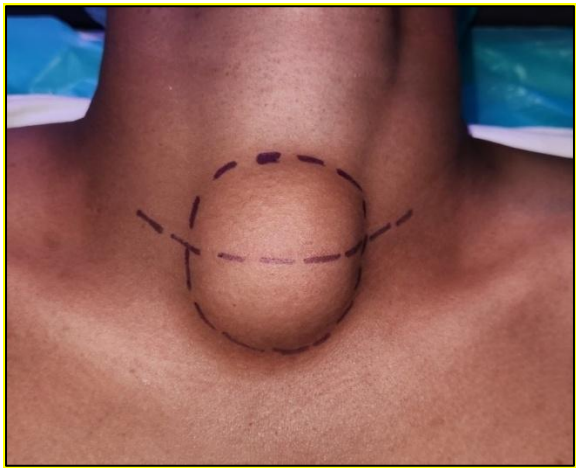

Figure 3: Planned horizontal incision along the skin crease.

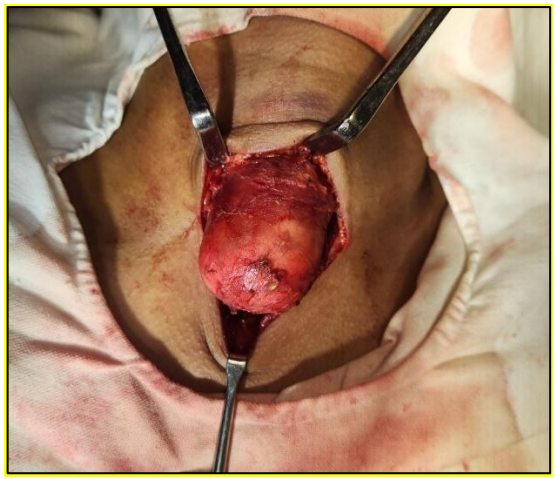

Figure 4: Capsule of the swelling reached.

Figure 5: The excised cyst.

The histopathology report confirmed the pre-operative diagnosis. Microscopic findings showed a cyst lined by stratified squamous epithelium with foreign body giant cells. The cyst wall included adnexal structures, skeletal muscle fibres and adipose tissue. The histopathological diagnosis was 'dermoid cyst'. The patient had a normal post-operative period with complete wound healing. No recurrence of the swelling was noted.

DISCUSSION

Cutaneous cysts can be congenital or acquired.[1] Congenital swellings can occur anywhere in the body but are most often located in the midline.[2,3] Reason being they develop along the lines of embryonic fusion; due to infolding of rudimentary skin during closure of embryonic fissures, from epithelial displacement during development or due to non-separation of the ectoderm and mesoderm.[1,3,4] They are three times more common in males with a mean age of 28 years; however, some may

present at birth.[4,5] Pathologically they can be either epidermal cysts (contain ectoderm only), dermoid cysts (contain ectoderm & mesoderm) or teratoid cysts (contain ectoderm, mesoderm & endoderm).[2,3] Dermoid cysts lack an entry port over the skin.[4,5] They contain cytokeratin 1 and 10 and the dermal derivates can include hair follicles, muscle, sweat glands, sebaceous glands and adipose tissue.[2,5] They are unilocular with white to yellowish, liquid to cheesy, odourless contents within.[1]

In the neck, these cutaneous cysts present as midline slow growing (due to accumulation of cutaneous products) masses which do not move on deglutition or on tongue protrusion.[5] The differential diagnosis of a suprasternal swelling in the midline of the neck include lesions of the thyroid gland, thyroglossal duct cyst, lymph nodes, epithelial inclusion cysts, lipomas, haemangiomas or direct extension of a laryngeal carcinoma.[1] To diagnose a midline dermoid cyst, Grabske mentions that they are doughier on palpation and do no move on deglutition or tongue protrusion (however this may be misleading if the dermoid is connected to deep fascia).[1]

Radiological studies like ultrasonography, CT scans or magnetic resonance imaging can help distinguish dermoid cysts from other lesions.[5] A fine needle aspiration cytology (FNAC) can be done for diagnosis.[3] Surgical excision of dermoid cyst is advised with a linear incision, measuring two-thirds of the cyst's diameter.[2,4,5] Cyst wall fragmentation is to be prevented during excision to prevent recurrence.[2]

Complications of these cysts include recurrence, due to improper surgical excision or rupture of the capsule, infections (which may be repetitive) and malignant transformation which include squamous cell carcinoma, malignant melanomas.[2,5]

CONCLUSION

In our case discussed here, we present how a swelling, at first glance, looked like a thyroid swelling, was in reality a dermoid cyst. The swelling of excised in-toto and sent histopathological examination.

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