

Case Study

A Rare Case of Midline Suprahyoid Dermoid Cyst

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A B S T R A C T

Dermoid cysts are congenital tumours which are usually not paid any attention at the time of presentation and later on, they catch the patient's attention. 40% of dermoid cysts get diagnosed by birth and 60% by five years of age. These are benign in nature. Only 5% have shown malignant transformation which is very rare. These are said to be ectodermal in origin embryologically. These are usually seen in the midline, as these are the site of embryonic fusion. These benign lesions are present as single or multiple throughout the body. For a surgeon, neck swelling is always a diagnostic challenge as it lies in close proximity to very important vital structures. In our case, a 33-year-old female presented to our Chettinad OPD with a painless swelling which turned to painful in due course of time and was located in the suprahyoid region in front of the neck. Our case is unique as the location of this mass was in the suprahyoid region which is usually a very rare location for dermoid cysts. Hence, during differential diagnosis, all surgeons should keep in mind that dermoid cysts have different presentations and locations, one of which happens to be a suprahyoid mass.

Keywords: Dermoid Cyst, Suprahyoid Region, Neck Region

Introduction

Lesions which are cystic in nature, and those located on the anterior aspect of the neck are common entities a surgeon encounters in day-to-day practice. We can classify these cystic masses as those arising in the midline or lateral part of the body. The commonest midline masses in the neck are cystic.¹ Among these, the usually encountered ones are thyroglossal cysts, sublingual dermoid, Ludwig's angina and sub-hyoid bursitis. 11.68 years is considered to be the mean age of presentation. The percentage occurrence of dermoid cysts in the head and neck region is said to be about 7%.² The usual locations of dermoid cysts are found to be the floor of the mouth and the lateral eyebrow. Dermoid cysts are developed along the lines of embryonic fusion. They

develop during embryological development, where the surface epithelial cells get entrapped at the fusion lines.³ Cavities bordered with stratified squamous epithelium constitute true dermoid cysts. Simple squamous epithelium with a fibrous wall, lines epidermoid cysts. Ectoderm, mesoderm, and endoderm derivatives make up the lining of teratoid cysts, resulting in linings that range from basic squamous to ciliate respiratory epithelium. On exploration, it can be seen that all three of these histological variation cysts typically include thick, greasy-looking material.⁴

Case Report

A 33-year-old woman came to our OPD with swelling in the midline of the anterior aspect of her neck for the past 15 years. The swelling gradually progressed from a size of

approx. 0.5 x 0.5 cm to attain the current size of 2 x 2 cm over a period of 2 weeks Figure 1. There was no pain in the swelling earlier, but pain started developing over a period of 2 weeks, which was the reason for the patient to come to OPD. On inspection, the skin over the swelling appeared normal. The skin was free from any signs of inflammation. On palpation, the swelling didn't show any fixity. It was soft in consistency. The patient had a moderate build with no positive family history. All routine blood investigations were within normal range.



Figure 1. Swelling below the Chin

Real-time ultrasound of the neck was done which showed a well-defined hypoechoic lesion with no internal vascularity in the intra-muscular plane in the anterior aspect of neck, revealing a possibility of intramuscular lipoma. No communication was seen with the thyroid gland.

The patient underwent excision and biopsy under general anaesthesia. The mass was identified and very carefully dissected from surrounding tissue. The cyst content appeared to be thick and white, with a waxy-appearing material Figure 2. The surgical wound was closed and healed uneventfully. The specimen was sent for histopathological evaluation.

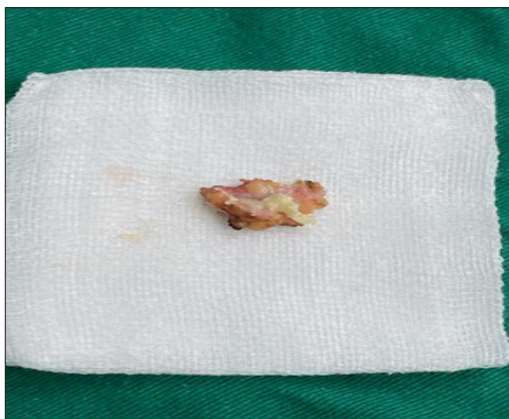


Figure 2. Macroscopic View of Enucleated Specimen

Post-operative histopathological examination revealed a cystic cavity lined by ortho-keratinised stratified squamous epithelium with connective tissue stroma Figure 3. The high-power view confirmed a dermoid cyst.

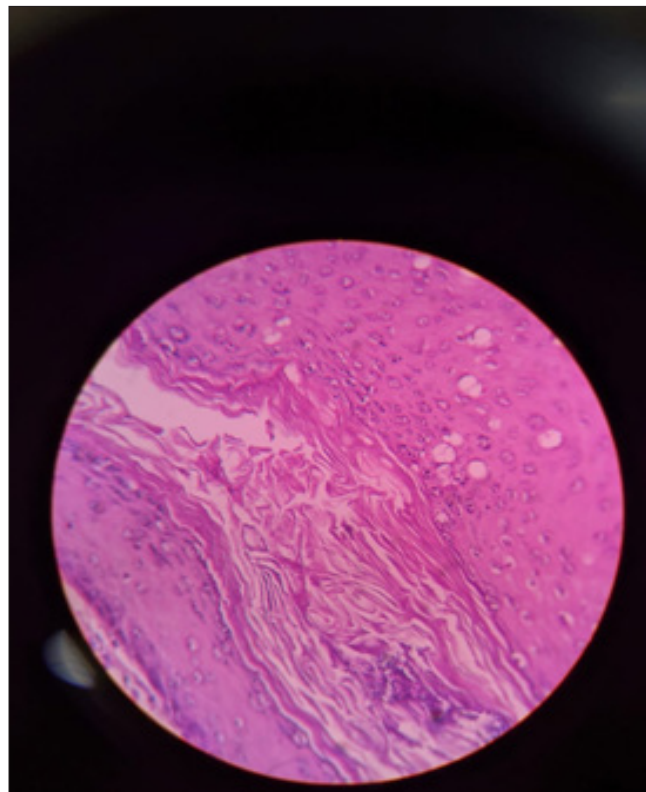


Figure 3. Microscopic Image

Discussion

The word “dermoid cyst”, is a generic term which encompasses and describes three main histological varieties, i.e. epidermoid cyst/ simple cyst, dermoid cyst/ compound cyst and teratoid/ complex cyst.⁴ A distinguishing characteristic of epidermoid cysts is that they are lined by stratified squamous epithelium without any dermal appendages, whereas dermoid cysts have dermal appendages such as hair follicles, hairs, sebaceous, and sweat glands. The ectoderm, endoderm, and mesoderm-derived tissue structures can be seen in the lining and wall of teratoid or complicated cysts. Only around 5% of dermoid tumours undergo malignant development.⁵

Conclusion

To conclude, dermoid cysts may be found in locations other than their common ones, like in this case, it presented as midline suprahyoid neck swelling. Hence surgeons should always treat dermoid cysts as a possible differential diagnosis of neck swelling. Even though distinctive radiographic characteristics and histological investigation make the diagnosis somewhat less difficult, the presence of cysts in unexpected locations may make it difficult to diagnose.⁶

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