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Steatocystoma Simplex of the Neck: A Rare Case Report

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Abstract

Steatocystoma is an uncommon disorder of the pilosebaceous unit characterized by the development of single or numerous sebum-containing dermal cysts. It appears in adolescence or early adulthood, with no predilection for sex. This case report describes a rare incidence of steatocystoma simplex in the submental region of the neck discussing its history, clinical, radiological, surgical excision and histopathologic examination.

Keywords: Steatocystoma; Neck swelling; Sebaceous glands

Introduction

Steatocystoma is a rare, benign sebaceous gland cyst that results from a mutation in the keratin-17 (K17) gene. As a result of this gene mutation, the keratin intermediary filament network is disrupted [1]. Its pathogenesis remains unclear, but it is predominantly referred to as a hamartomatous malformation of the pilosebaceous duct junction [2]. They can occur as isolated, singular lesions and, in that scenario, the term Steatocystoma Simplex (SS) is used. Steatocystoma appears in adolescence or early adulthood, with no predilection for sex [3,4]. In this article a rare case of steatocystoma simplex of the submental region will be presented.

Case Presentation

A 17 years old female presented with painless submental swelling started two years ago. The patient's past medical history was non-contributory. She had negative family history of similar lesions and denied any history of trauma, infection, or surgery in this region. On general clinical examination, no skin lesions, no involvement of any other areas of the body other than submental area. Locally, there is a 3 x 4 cm swelling in the submental region, mobile, soft, non-tender and not attached to skin or underlying tissues. Skin is intact with no signs of inflammation or ulceration. Intraorally, tongue is not elevated and swelling can be felt bimanually through the floor of the mouth lying inferior to the mylohyoid muscle. A non-guided Fine Needle Aspiration Cytology (FNAC) was performed and was suggestive of Epidermal inclusion cyst. A CT scan with contrast was performed and revealed a 5x2.5 cm encapsulated mass in the submental region (Figure 1). Patient was operated for excision of the mass through submental skin approach under general anaesthesia *via* naso-tracheal intubation (Figure 2A). After dissection of subcutaneous fat and platysma, the mass was delivered in one piece encapsulated and sent for biopsy (Figure 2B). The procedure underwent uneventful and she was discharged after three days. The patient was prescribed antibiotic therapy (amoxicillin–clavulanic acid) and analgesics and scheduled for follow up. Routine biopsy report revealed epithelial cyst with thin eosinophilic cuticle in the inner part and adjacent sebaceous gland with thick cheesy content in the cut section (Figure 3). During follow up, patient improved and the wound healed without complications.

Discussion

Clinical features of Steatocystoma simplex are a soft, movable intracutaneous cyst with a distinct boundary associated with a normal skin colour and no inflammatory component. To distinguish steatocystoma simplex from steatocystoma multiplex, it is important to make sure that the lesion is solitary and occurs in adulthood with a non-heritable pattern [5]. Steatocystoma simplex is thought to originate from a naevoid malformation of the pilosebaceous duct junction and a non-heritable benign adnexal tumor [6]. Steatocystoma simplex most commonly occur on the face and the chest. The upper limbs and axillae are also relatively common sites of occurrence, while rarely occur on relatively uncommon sites, such as the back, leg, oral cavity, perineum, and scalp [5,7,8]. Few case reports in literature revealed SS related to the face and scalp, and none of them appeared in the neck or submental region [6,9,10-12]. The differential diagnosis of steatocystoma simplex includes steatocystoma multiplex, a dermoid cyst, cystic sebaceous hyperplasia, and hidrocystoma.

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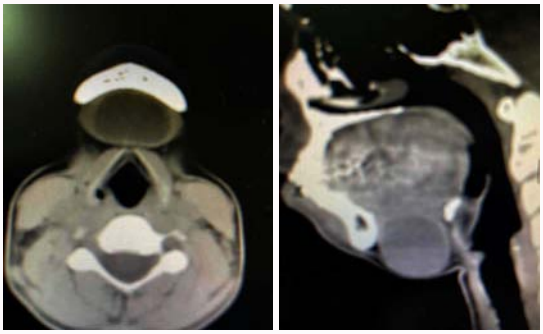

Figure 1: a) Axial cut showing Submental encapsulated cystic mass lingual to the inferior border of the mandible, **b)** Sagittal cut showing the mass is lying below the mylohyoid muscle and just above the skin.

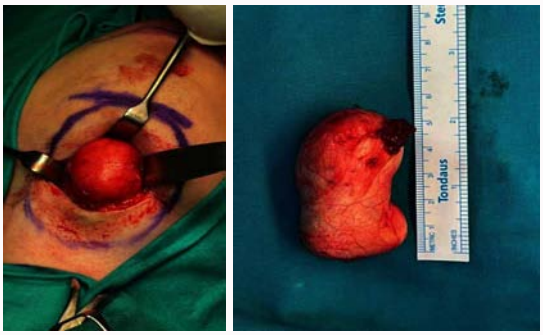

Figure 2: a) Exposure and dissection of the mass, **b)** The specimen after excision.

Steatocystoma multiplex is differentiated clinically by the occurrence of multiple lesions, usually over the trunk, and inherited in an autosomal dominant pattern. A dermoid cyst, cystic sebaceous hyperplasia, and hidrocystoma are distinguished by histologic characteristics [5,6]. On gross examination, the cyst contained oily, yellowish fluid. The histological examination revealed a cystic mass surrounded by stratified squamous epithelium with a saw-tooth appearance that lacked a stratum granulosum. In the innermost area of the cyst, a prominent, acellular, homogenous, eosinophilic, and compact horny layer was seen. Large, flattened sebaceous glands were within or near the cyst wall. If there is a hyaline cuticle in the cystic wall, it can be shown to be a steatocystoma simplex, even in the absence of sebaceous glands [5,6]. The treatment of choice is simple excision with an intact cyst wall to reduce the risk of recurrence. Also, aspiration, cryosurgery, electrocautery, and carbon dioxide laser therapy are included as possible treatment options of steatocystoma simplex [7,9]. There has been no reported case of recurrent steatocystoma simplex after excision [12].

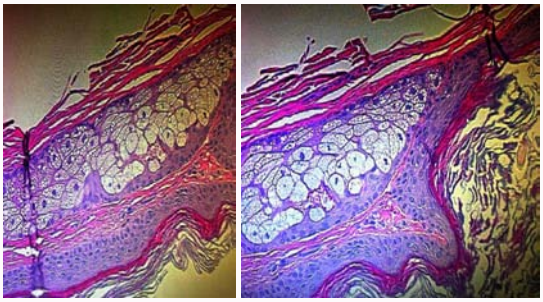

Figure 3: a, b) Epithelial cyst with thin eosinophilic cuticle in the inner part and adjacent sebaceous gland.

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