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A SLOW GROWING CHEEK MASS: A CASE REPORT OF EPIDERMOID CYST

KEY WORDS: Epidermoid cyst, epidermal inclusion cyst, cheek swelling, magnetic resonance imaging, surgical excision

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ABSTRACT

Background: Epidermoid cysts are common benign cystic lesions; however, their occurrence in the cheek is relatively uncommon and may mimic other soft tissue swellings of the face. Accurate diagnosis often requires radiological and histopathological evaluation. **Case Presentation:** A 48-year-old female presented with a painless, gradually enlarging swelling over the left cheek for one year. Clinical examination revealed a well-circumscribed, mobile, non-tender mass measuring approximately 3×3 cm. Magnetic resonance imaging demonstrated a well-defined cystic lesion in the subcutaneous plane with diffusion restriction, suggestive of an epidermoid cyst. Complete surgical excision was performed, and histopathological examination confirmed the diagnosis of an epidermoid inclusion cyst. The postoperative period was uneventful, with no evidence of recurrence during follow-up. **Conclusion:** Epidermoid cyst should be considered in the differential diagnosis of cheek swellings. Magnetic resonance imaging aids in preoperative diagnosis, while complete surgical excision with histopathological confirmation remains the treatment of choice and provides excellent outcomes.

INTRODUCTION

Epidermoid cysts are among the most common benign cutaneous cysts encountered in surgical practice.[1] They arise from the proliferation of epidermal cells within the dermis and are lined by keratinizing stratified squamous epithelium.[1] Although these lesions frequently occur on the scalp, face, neck, and trunk, their occurrence within the cheek is relatively uncommon and may present a diagnostic challenge because of the wide range of lesions that can occur in this region.[2,3]

Most epidermoid cysts remain asymptomatic and grow slowly over time. Consequently, patients often seek medical attention only when the swelling becomes cosmetically noticeable or begins to interfere with daily activities. In the head and neck region, cheek swellings raise several differential diagnoses including lipoma, dermoid cyst, sebaceous cyst, minor salivary gland lesions, and benign mesenchymal tumours.[4] Therefore, radiological evaluation and histopathological confirmation are often necessary for establishing a definitive diagnosis.

Case Report

A 48-year-old female presented to the otorhinolaryngology outpatient department with a complaint of swelling over the left cheek for the past one year. The swelling had been insidious in onset and had gradually increased in size over time. There was no associated pain, discharge, fever, difficulty in mastication, or preceding history of trauma. The patient sought medical attention primarily because of the persistent facial asymmetry and cosmetic concern.

On examination, a solitary swelling measuring approximately 3×3 cm was noted over the left cheek. The lesion was situated approximately 1 cm medial to the angle of the mouth, 7 cm

lateral to the angle of the mandible, and 5 cm superior to the ramus of the mandible. The overlying skin appeared normal without erythema, punctum, or evidence of inflammation. The swelling was non-tender, well circumscribed, and freely mobile over the underlying structures. There was no cervical lymphadenopathy and facial nerve function was intact.

Magnetic resonance imaging of the face and neck demonstrated a well-defined lesion in the subcutaneous plane of the left cheek. The lesion appeared hypointense on T1-weighted sequences and hyperintense on T2-weighted sequences with focal internal hypointense areas. Diffusion-weighted imaging demonstrated true diffusion restriction, and mild peripheral enhancement was observed following contrast administration. Based on the imaging characteristics, an epidermoid inclusion cyst was considered the most likely diagnosis.

The patient subsequently underwent complete surgical excision of the lesion. Intraoperatively, a well-encapsulated cystic mass containing keratinous material was identified and removed in toto without rupture of the cyst wall. The excised specimen was submitted for histopathological examination.

Microscopic examination revealed a cyst lined by keratinized stratified squamous epithelium with a prominent granular layer. The lumen was filled with laminated keratinous debris. No skin appendages were identified within the cyst wall, and there was no evidence of dysplasia or malignancy. These findings confirmed the diagnosis of an epidermoid inclusion cyst.

The postoperative course was uneventful. The wound healed satisfactorily, and the patient reported complete resolution of the facial swelling. During follow-up visits, there was no

evidence of recurrence, postoperative pain, or significant inflammation.

DISCUSSION

Epidermoid cysts are benign lesions that arise either from congenital sequestration of ectodermal tissue during embryogenesis or from traumatic implantation of epidermal elements into deeper tissues.[5] While they are frequently encountered in dermatological and surgical practice, their occurrence in the cheek remains relatively uncommon.[2,6] This unusual location often creates a diagnostic dilemma, particularly when the lesion presents as an isolated, slowly enlarging facial swelling.

The present case demonstrates several features that are characteristic of epidermoid cysts. The patient presented with a long-standing, painless swelling that had gradually increased in size over a period of one year. Such an indolent clinical course is typical and often contributes to delayed presentation. Because these lesions are slow growing and usually asymptomatic, patients frequently seek treatment only when cosmetic concerns become significant.[1]

A number of conditions must be considered when evaluating a cheek mass. Lipomas, dermoid cysts, sebaceous cysts, vascular malformations, enlarged lymph nodes, and minor salivary gland tumours may all present in a similar manner.[4] Clinical examination alone may not always distinguish among these entities, particularly when the lesion is located within the subcutaneous plane. In our patient, the absence of pain, skin changes, and neurological deficits suggested a benign process, but imaging was required to narrow the differential diagnosis.

Magnetic resonance imaging proved particularly useful in this case. Epidermoid cysts typically demonstrate low signal intensity on T1-weighted images and high signal intensity on T2-weighted images because of their keratin content. Diffusion restriction, which was observed in our patient, is considered one of the most helpful imaging characteristics and aids in differentiating epidermoid cysts from other cystic lesions.[7,8] MRI also allows accurate assessment of lesion extent and relationship to adjacent structures, which is important for surgical planning.

Definitive diagnosis, however, remains histopathological. The characteristic finding is a cyst lined by stratified squamous epithelium containing a granular layer and filled with laminated keratin debris. The absence of skin appendages differentiates epidermoid cysts from dermoid cysts.[9,10] Histopathological examination in the present case confirmed these classic features and excluded malignant transformation.

Complete surgical excision remains the treatment of choice. The key principle is removal of the cyst in its entirety with preservation of the capsule. Incomplete excision or rupture of the cyst wall may leave residual epithelial elements behind, predisposing to recurrence.[11] In our case, careful dissection allowed complete removal of the lesion without rupture, which likely contributed to the favourable outcome.

Although epidermoid cysts are considered benign lesions, malignant transformation has occasionally been reported in the literature, most commonly into squamous cell carcinoma.[12,13] While the reported incidence is low, this possibility underscores the importance of submitting all excised specimens for histopathological evaluation.

Furthermore, complete excision not only prevents recurrence but also eliminates any potential risk of future malignant change.

The postoperative course in our patient was uncomplicated,

and no recurrence was observed during follow-up. This outcome is consistent with previous reports demonstrating excellent prognosis following complete excision.[6,14] The case also highlights the importance of considering epidermoid cyst in the differential diagnosis of cheek swellings, particularly when imaging demonstrates features suggestive of a keratin-containing lesion.

CONCLUSION

Epidermoid cysts involving the cheek are uncommon benign lesions that may mimic several other soft tissue swellings of the face. Careful clinical evaluation combined with appropriate imaging can facilitate accurate preoperative diagnosis. Histopathological examination remains essential for confirmation. Complete surgical excision with removal of the cyst wall remains the cornerstone of treatment and is associated with excellent functional and cosmetic outcomes with minimal risk of recurrence.



Fig 1: Swelling over left cheek.



Fig2: MRI of neck showing diffuse soft tissue enhancement of subcutaneous plane of left cheek



Fig 3 : Gross cut section of the swelling.

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