



## AN EPIDERMOID CYST OF PAROTID GLAND, A RARITY: A CASE REPORT

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**ABSTRACT** Epidermal cysts are common benign lesions arising from ectodermal tissue, usually seen in the skin of the scalp, face, or trunk. However, their occurrence within the parotid gland is exceedingly rare, posing diagnostic and therapeutic challenges due to their clinical resemblance to other cystic or neoplastic lesions of the salivary gland.

**KEYWORDS :** Parotid Gland, Epidermoid Cyst, Tuberculosis, Langhans Giant Cell, Granulomatous Inflammation

## INTRODUCTION

- **Definition:** An epidermoid cyst is a benign, slow-growing lesion lined by stratified squamous epithelium and filled with keratinous debris. Unlike dermoid cysts, it lacks adnexal structures like sebaceous or sweat glands.
- **Rarity:** Occurrence in the parotid gland is extremely rare. These cysts are often misdiagnosed as more common parotid tumors (e.g., pleomorphic adenoma).

## Case Presentation

- **Patient:** A 31-year-old male patient presented to our outpatient department with a complaint of swelling on the left side of the face in front of the ear for two years. The swelling was insidious in onset and gradually progressed to reach the present size. There was no history of pain, fever, difficulty in swallowing, or any discharge from the swelling. There were no other swellings present anywhere else in the body. There was also no history of trauma or any previous surgeries reported in the facial region slowly enlarging mass in the left parotid region over 9 months.

### Clinical Findings:

- On examination, there was a localized ovoid swelling in the right preauricular region. The swelling was  $3 \times 1$  cm in size and extended around 2 cm below the lobule of the right ear. There was no lifting of the ear lobe and the colour over the swelling was of normal skin colour with no surface discharge. On palpation, the swelling was soft in consistency, nontender, and nonpulsatile and was movable below the skin. Intraorally, there was no swelling present
- No facial nerve involvement
- No history of trauma or surgery

### Investigations:

- **Ultrasound:** Well-defined, hypoechoic  $\sim 3.4 \times 1.8$  cm cystic lesion within superficial parotid lobe of right parotid gland with peripheral vascularity. Likely benign tumour (Pleomorphic adenoma)
- hypoechoic  $\sim 3.4 \times 1.8$  cm cystic

### Management:

- **FNAC:** Showed scanty with occasional anucleated squames and inflammatory debris

- Total Conservative Parotidectomy with facial nerve preservation.

Excised lesion sent for histopathology

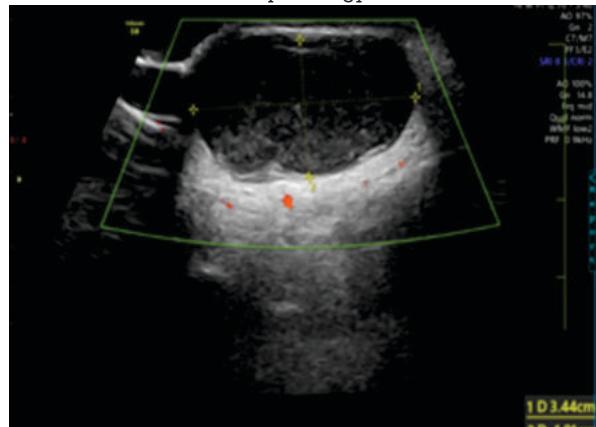


Figure 1: USG Shows Parotid Gland.

## III. RESULTS (Histopathology Findings)

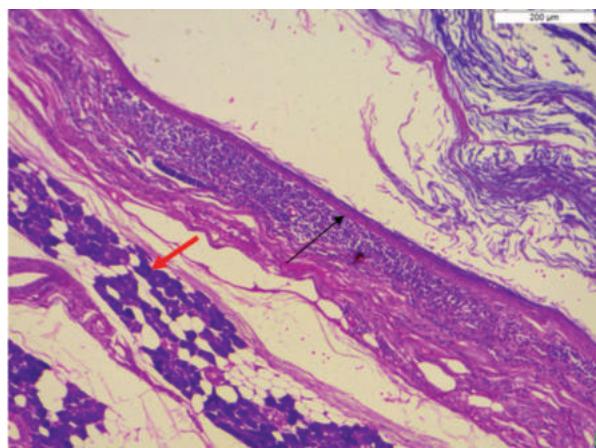
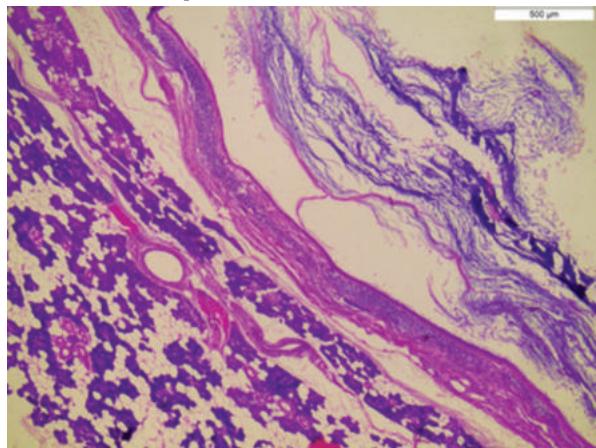
### Gross:

- External surface is pale brown, nodular and cystic at the superior pole. Cut surface shows a well circumscribed cyst measuring  $3 \times 3$  cm filled with thick grey white cheesy material. Adjacent area appears pale brown.
- 2.5 cm cystic lesion filled with yellow-white cheesy material.
- **Microscopy:** Sections from superficial lobe show salivary gland parenchyma with parts of a cyst displaying foci of ulceration and lined in areas by keratinizing stratified squamous epithelium exhibiting gradual keratinisation and contains laminated keratin in the lumen.
- 2 small intraparotid lymph nodes are seen with no lesion.
- An intraparotid lymph node in A6 shows benign salivary gland acini and ducts in the hilar region.

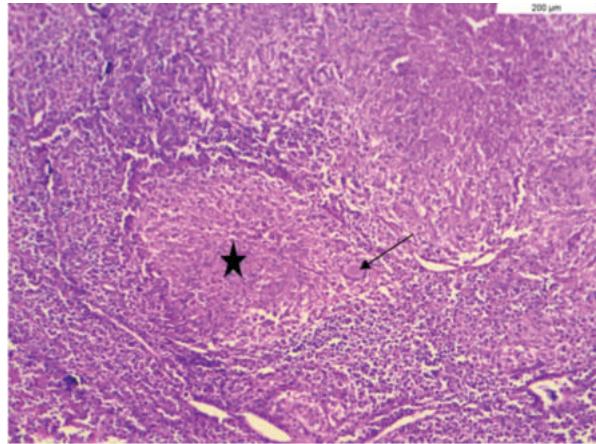
There is epithelioid cell granulomas or 2 lymph nodes with many discrete and confluent granulomas displaying central caseous necrosis palisaded by epithelioid histiocytes, lymphocytes and Langhans and foreign body type giant cells. No skin appendages (no hair follicles, sebaceous or sweat

glands)No malignancy or dysplasia

- Final Diagnosis: Epidermoid cyst of the parotid gland with lymph node showing langhans type giant cell
- Postoperative Course: Uneventful; no recurrence at 6-month follow-up.



**Figure 1 & 2**- HPE Parotid gland (Left lower) (red arrow)with epidermoid cyst (right upper) lined by keratinizing stratified squamous epithelium (black arrow), H&E, x100 (upper image) x400 (lower image)



**Figure 3** - torsion Lymph node with granulomatous inflammation with Langhans type giant cells (Arrow) and necrosis (Star), H&E, x100

#### IV. DISCUSSION

- Epidermal cysts are common skin lesions that consist of epithelial lined cavities which are filled with viscous or semisolid epithelial degradation products [7] Epidermal cysts usually occur secondary to obstruction while dermoid cysts arise from developmental epithelial remnants or they are secondary to traumatic implantation

of epithelial fragments[8] Its clinical and radiological characteristics can be ambiguous. Its histology shows predominantly squamous cells. Such lesions are quite unusual and they are not included in the WHO classification[9]

- Epidemiology: Only a few cases reported in the literature. Can occur in any age group but commonly presents in adults.
- Pathogenesis:
- o Congenital: Due to ectodermal inclusion during development.
- o Acquired: Trauma, surgery, or implantation of epithelial cells.
- Differential Diagnoses:
- o Pleomorphic adenoma
- o Warthintumor
- o Branchial cleft cyst
- o Sialocele
- Diagnostic Challenge: Preoperative diagnosis is difficult. FNAC is useful but may not distinguish between benign cystic lesions.
- Treatment: Complete surgical excision (e.g., superficial parotidectomy) is curative. Incomplete removal may lead to recurrence.

**Prognosis:** Excellent, with no reported malignant transformation

#### CONCLUSION

- Surgical excision remains the gold standard for diagnosis and cure.
- Epidermoid cysts of the parotid gland are rare, and often misdiagnosed preoperatively.
- A high index of suspicion, along with imaging and histopathology, is essential.

#### Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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