CASE REPORT

EPIDERMOID CYST OF THE PAROTID GLAND: A RARE CASE

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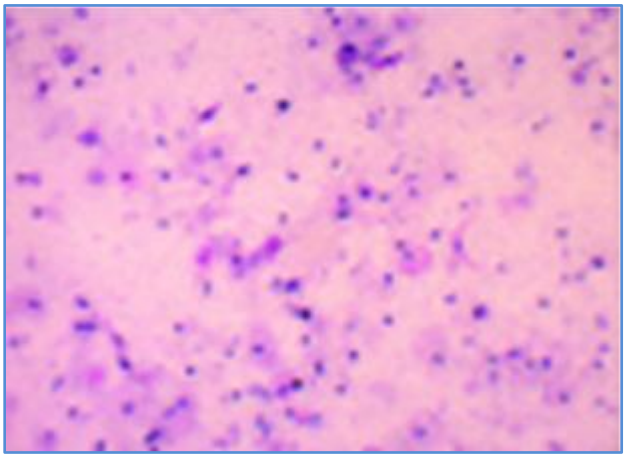
ABSTRACT: Epidermoid cysts are benign lesions, characterized by cystic spaces lined by simple squamous epithelium (epidermal cyst), containing skin adnexa ("true" dermoid cyst) or tissues of all three germ layers (teratoid cyst). 7% of all cases of epidermoid and dermoid cysts are seen in the head and neck. There is often a diagnostic dilemma with the more common cystic lesions of this region. The most common are the epidermal cysts which present as nodular and fluctuant subcutaneous lesions and they are seen mainly in the acne - prone areas like the head, neck and the back. The presence of benign cystic lesions in the salivary glands is extremely rare. We are reporting a rare case of a 12-year old female child who presented with a soft swelling on the left side of the face. A diagnosis of an epidermoid cyst was given on cytology. An enucleation of the cyst was performed and the histopathology confirmed the above diagnosis.
KEYWORDS: Epidermoid cysts, epidermal cysts, benign salivary swelling, parotid cyst.

INTRODUCTION: Cystic lesions are uncommon within the parotid gland, which comprise approximately 5% of all the salivary gland tumours, a majority of which represent the cystic components of neoplasms.[1] An epidermoid cyst is a benign cyst which is most commonly seen in the skin. The cyst develops out of the ectodermal tissue. Histologically, it is made of a thin layer of squamous epithelium. Several synonyms exist for epidermoid cysts: epidermal cysts, epidermal inclusion cysts, infundibular cysts and keratin cysts. The epidermal inclusion cysts more specifically refer to the implantation of epidermal elements into the dermis. The infundibular cysts originate from the infundibular portion of the hair follicle. The presence of epidermoid cysts in the salivary gland is a rare entity and these cysts require surgical interventions. Hence, it is essential to have a pre-operative diagnosis for the workup of the patients. In this case, the diagnosis of an epidermoid cyst was given on cytology and which was later histopathologically confirmed. There are only few case reports on epidermoid cysts occurring in parotid glands, which have been published in the world.

CASE HISTORY: A 12 year-old female child presented with a facial swelling just below the left ear which was of one and a half year's duration. The swelling was gradually increasing in size and painless. On examination, a 4 x 3 cm, ovoid, mobile swelling was seen in the pre – auricular region extending into the external auditory canal with a bulge. [Table / Fig-1]. The swelling was soft in consistency and non-tender. An ultrasound examination showed an evidence of a hypoechoic cystic lesion within the substance of the left parotid gland, which measured 2.3x1.9 cm. There was no vascularity in the lesion.

[Table/Fig-1]: Clinical photo of the salivary gland swelling

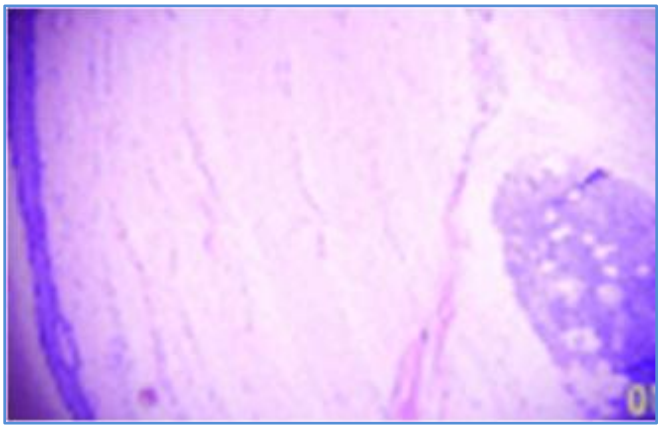
Fine needle aspiration of the swelling yielded a foul smelling, thick, pultaceous material. Its smears showed sheets of benign superficial and intermediate squamous cells in a background of a mild inflammatory infiltrate [Table/Fig-2]. A cytological diagnosis of an epidermoid cyst of the left parotid gland was made.



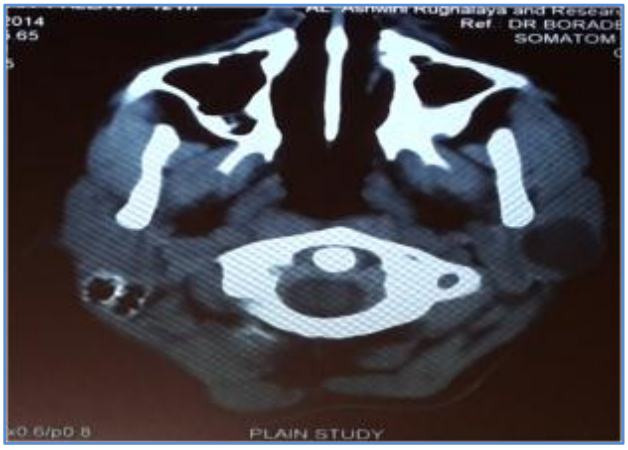
[Table/Fig-2]: Cytology showing mature squamous cells and anucleate squames. (MGG stain X100)

The patient underwent an enucleation of the cyst in toto with parotid gland preservation and the postoperative period was uneventful [Table/Fig-3]. The gross examination of the specimen showed a grey brown, globular mass which measured 2.5x2.0cm. Its cut surface yielded a pultaceous material. Sections were given from relevant areas in the cyst wall. Microscopy showed normal parotid acini with the adjacent cyst wall, which were lined by stratified squamous epithelium with an intra-luminal laminated keratinous material [Table/Fig-4]. A final diagnosis of an epidermoid cyst of the left parotid gland was made. The patient is on regular follow up and is doing fine.

[Table/Fig-3]: Intraoperative picture showing empty sac after cyst removal



[Table/Fig-4]: Histology showing parotid acini with adjacent cyst wall lined by squamous epithelium



[Table/Fig-5]: CT scan plain showing intra parotid cyst on left side

DISCUSSION: Epidermoid cysts are common skin lesions that consist of epithelial lined cavities which are filled with viscous or semi-solid epithelial degradation products. They are developmental cysts that occur in the head and neck with an incidence ranging from 1.6 to 6.9%.[2, 3] Epidermoid cysts usually occur secondary to obstructions, whereas dermoid cysts arise from developmental epithelial remnants or are secondary to traumatic implantations of epithelial fragments.[1]

The benign parotid cystic salivary lesions have a relatively low incidence.[4]These cysts account for 5% of all the parotid lesions. Both men and women are equally affected and they are commonly seen between the fifth and seventh decades of life.[1] Clinically, they present as painless swellings without any attachment to the overlying skin or involvement of the facial nerve. The cystic lesions of the parotid can be either congenital or acquired. The congenital lesions are most often ectodermal in origin and they include branchial cleft cysts/lymphoepithelial cysts. The acquired cysts can be due to obstructions, neoplasms, calculi and trauma. The neoplasms include benign mixed lesions, Warthin's tumour, mucoepidermoid carcinoma, adenoid cystic carcinoma and acinic cell carcinoma, all of which can present as cystic lesions.[5]

An epidermoid cyst of the parotid gland is a rare benign cystic lesion that requires a surgical intervention. It is derived from the epidermis and is formed by a cystic enclosure of the epithelium within the dermis that becomes filled with keratin and lipid – rich debris.[2] It is common in young to middle aged adults. It can occur at the site of surgical incisions due to an iatrogenic implantation of the epidermis into the deeper tissues.[4,5] 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.[4]

The diagnosis of cystic lesions is challenging, owing to the difficulty of determining the benign versus the malignant processes. Malignant lesions are frequently suspected when there is a rapid enlargement associated with lymphadenopathy or facial nerve paresis. This distinction plays an important role in determining the treatment modality. The preoperative diagnosis of the lesion plays an important role. Fine needle aspiration cytology is the most reliable and the least expensive method which helps in making a preoperative diagnosis.

CONCLUSION: To conclude, epidermoid cysts of the parotid gland are rare entities, with very few cases having been mentioned in the literature. Epidermoid cysts can be considered as a differential diagnosis in cases with a recurrent, painless enlargement of the parotid gland which has a soft consistency. Enucleation is a safe and effective procedure that ensures complete removal of the cyst and a low recurrence rate. Our case has explained the significance of an accurate pre-operative diagnosis of a benign cystic lesion of the parotid and its further management.

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