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Case Report

Intra-Parotid Epidermal Inclusion Cyst: A Case Report of a Rare Entity

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ABSTRACT

Benign cystic lesions of the parotid gland are relatively rare and majority of these represent cystic component of a neoplasm. These cysts can be congenital, acquired, or occasionally may arise from surrounding structures. Its presentation as an epidermal inclusion cyst is even rare. Its clinical and radiological characteristics can be quite ambiguous. We present a rare case of a 24-year-old male who presented with a cystic soft swelling on the right side of the face. A superficial parotidectomy was performed and on histopathology a diagnosis of an intraparotid epidermal inclusion cyst was made. These lesions within the salivary gland are quite unusual and are not included in the World Health Organisation (WHO) classification.

Keywords: Epidermal inclusion cyst, parotid, intraparotid.

INTRODUCTION

The incidence of benign cystic lesions of the parotid gland is relatively low, comprising approximately *5%* of all parotid tumours, a majority of which represent the cystic components of neoplasms. [1] Rarely they can be congenital, acquired, or occasionally may arise from surrounding structures. They usually present with equal distribution between males and females. Most common clinical presentation is unilateral painless swelling in the area of the parotid gland, without fixation to the overlying skin or involvement of the facial nerve. [2] An epidermoid cyst is usually an acquired cyst which is most commonly seen in the skin. Several synonyms exist for epidermoid cysts: epidermal cysts, epidermal inclusion cysts, infundibular cysts or keratin cysts. [1] The cyst develops out of the ectodermal tissue. The occurrence of epidermal cysts in the salivary gland is a rare entity and these cysts require surgical interventions. Hence, it is very essential to have a pre-operative diagnosis for the workup of the patients. On review of literature we found very few case reports of epidermal inclusion cysts of salivary gland.

CASE HISTORY

A 24-year-old male presented with a salivary gland swelling on the right side of the face, which was of one and a half year duration. However it was entirely asymptomatic. The swelling was gradually increasing in size. He denied any history of trauma to the parotid area. On examination, a 3.5 x 3 cm swelling was seen in the right

pre-auricular region. The overlying skin was normal in colour and freely moveable over the mass. The swelling was soft in consistency. The function of facial nerve was preserved.

An ultrasound examination showed a hypoechoic cystic lesion in the right parotid region measuring 3.2 x 1.5 cm. There was no vascularity noted in the lesion. Clinically, an impression of lipoma or pleomorphic adenoma with cystic change was entertained.

The patient underwent a superficial parotidectomy and the postoperative period was uneventful.

The gross examination of the specimen showed a grey brown, globular mass which measured 3.2 x 2.0cm. Cut surface yielded a cyst filled with pultaceous material.

Microscopy showed normal parotid gland with the presence of a ruptured epidermal inclusion cyst [Figure-1]. The cyst wall was lined by stratified squamous epithelium with laminated keratinous material [Figure-2]. Adjacent tissue showed chronic inflammation and foreign body giant cell reaction [Figure-3]. Based on the histomorphological features, diagnosis of an intra-parotid epidermal inclusion cyst of the right parotid gland was made.

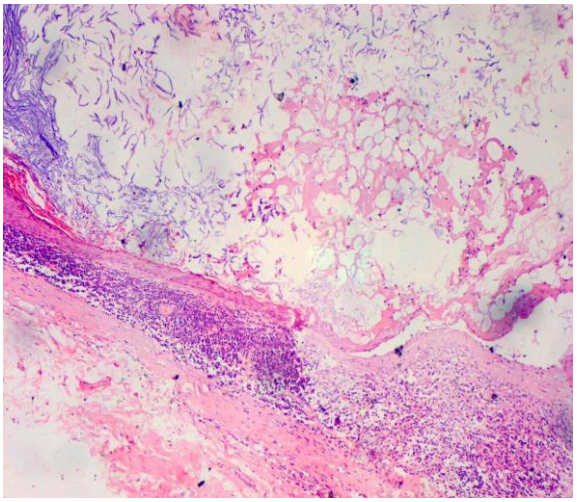

Figure 1: Normal parotid gland with the presence of a epidermal inclusion cyst is seen (H&E 10x)

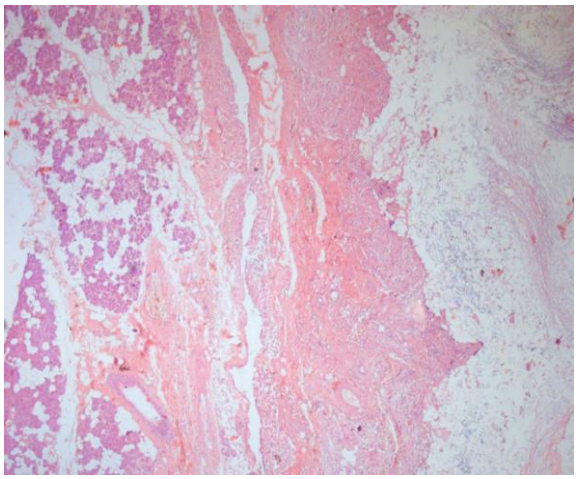

Figure 2: Intraparotid epidermal inclusion cyst. Wall of the cyst is lined by stratified squamous epithelium with laminated keratinous material. (H&E 10 x)

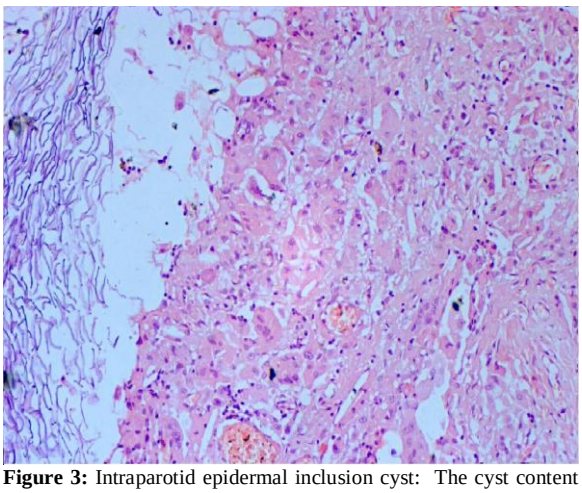

Figure 3: Intraparotid epidermal inclusion cyst: The cyst content shows laminated keratinous material along with foreign body giant cell reaction (H&E 40x).

DISCUSSION

Epidermal inclusion cysts are common skin lesions that consist of epithelial lined cavities which are filled with semi solid epithelial degradation products. [1] They are developmental cysts that occur in the head and neck with an incidence which ranges from 1.6 to 6.9%. [3]

An epidermoid cyst of the parotid gland is a very rare benign cystic lesion. 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. [3] It is common in young to middle aged adults. Its clinical and

radiological characteristics can be ambiguous. These lesions within the salivary glands are quite unusual and are not included in the WHO classification. [4]

The benign cystic lesions of the parotid gland have a relatively low incidence [4] and they account for 5% of all the parotid lesions equally affecting men and women. They are commonly seen between the fifth and seventh decades of life. [5] Clinically, they present as painless swellings without any attachment to the overlying skin or involvement of the facial nerve. Benign cysts of the parotid gland can be congenital, acquired or occasionally may arise from surrounding structures. [6] The congenital lesions are most often ectodermal in origin and they include branchial cleft cysts or lymphoepithelial cysts. The acquired cysts can be due to obstructions, neoplasms, calculi and trauma. The neoplasms include pleomorphic adenoma, Warthin's tumour, mucoepidermoid carcinoma, adenoid cystic carcinoma and acinic cell carcinoma, all of which can present as cystic lesions. [7]

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 which is 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.

CONCLUSION

Epidermoid cyst of the parotid gland is a rare entity, with only few cases having been reported 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.

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