

CASE REPORT ARTICLE

Dermoid cyst of parotid gland; Report of a rare entity with literature review.Samreen Younas¹, Nabeela Riaz², Saba Hanif³**Article Citation:** Younas S, Riaz N, Hanif S. Dermoid cyst of parotid gland; Report of a rare entity with literature review. Professional Med J 2022; 29(6):917-919. <https://doi.org/10.29309/TPMJ/2022.29.06.6635>

ABSTRACT... Dermoid cysts are developmental cysts in young adults that are very uncommon in head and neck region. In oral and maxillofacial area the cysts are mainly present in the submental triangle and in floor of mouth. In the neck dermoid cysts usually present as midline neck mass. Parotid gland is extremely rare site at which the dermoid cysts develop. There are only 19 cases in literature that has been reported cases till date. Superficial parotidectomy is the suggested surgical treatment, however sometimes enucleation is all that is needed. We present a rare case of this entity which was pre-operatively diagnosed as pleomorphic adenoma on Fine Needle Aspiration Cytology.

Key words: Dermoid Cyst, Parotid Cyst, Parotid Swellings.

INTRODUCTION

Dermoid cysts are benign lesions very uncommon in head and neck region these are lined by stratified squamous epithelium and have a fibrous connective tissue wall. These cysts contain a variable amount of pilo-sebaceous units and sweat glands which makes it different from epidermoid cyst. The lumen of the cyst is usually filled with sebaceous material and occasionally hair shafts. More than 50% of the dermoid cysts occur in head and neck region and about one third of these are present at birth.¹

Malignant transformation of dermoid cyst is very rare and is mostly seen in floor of the mouth. Only 19 cases of dermoid cyst in parotid have been reported till date.

The average age of the patients is 31 years and these cysts are generally asymptomatic unless they become large enough to cause cosmetic problems or pressure effects.³

A conclusive preoperative diagnosis of dermoid cyst is often difficult because clinical and radiological presentation is ambiguous.⁴

CASE REPORT

A 38 years old female patient presented with a history of swelling on right pre-auricular area for the last 6 months (Figure-1).



Figure-1. Swelling right parotid

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Clinically the swelling was approximately 3x3 cm in size, firm in consistency, non-tender, non-fluctuant and not adherent to underlying or overlying structures. The margins of the swelling were well defined, and surface was smooth. The temperature of the swelling was same as adjacent skin. Facial nerve function was normal. Patient was not taking any medications and had no other systemic conditions. Fine Needle Aspiration Cytology was performed multiple times, last one showed the swelling to be Pleomorphic adenoma and the rest were inconclusive. No radiological investigation was performed before surgery. We planned superficial Parotidectomy based on the diagnosis of Pleomorphic adenoma. After giving modified Blair's incision the mass was exposed after identifying facial nerve branches (Figure-2). Intra-operatively the capsule of the mass was more whitish, without abnormal vascularization. The mass was doughy or rubbery in consistency and retained pitting after application of pressure during manipulation. The thin capsule of the mass was inadvertently ruptured which revealed whitish cheesy material, it changed our intraoperative diagnosis of the mass, we performed enucleation of the lesion, under continuous facial nerve monitoring, as lesion was easily dissected from parotid tissue.

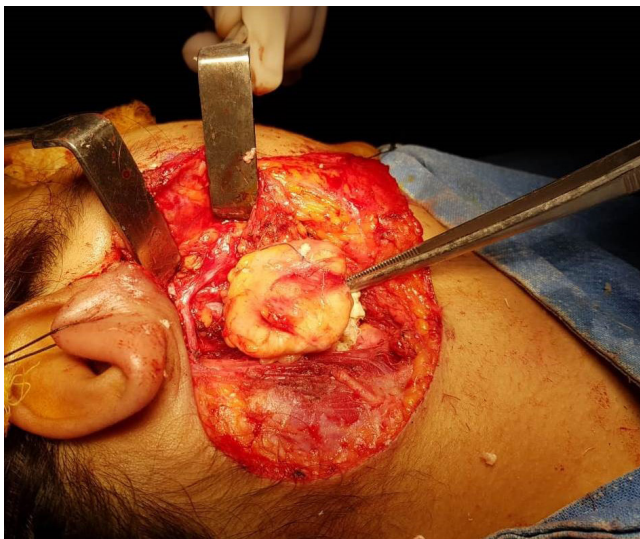


Figure-2. Intra-operative picture

Post operatively patient showed temporary weakness of facial nerve branches (Figure-3). Pathological examination demonstrated a cystic structure lined by keratinizing type

stratified squamous epithelium and having fibro-collagenous wall. Many hair follicles were also seen. The patient had no signs of a recurrence at two years of follow up.

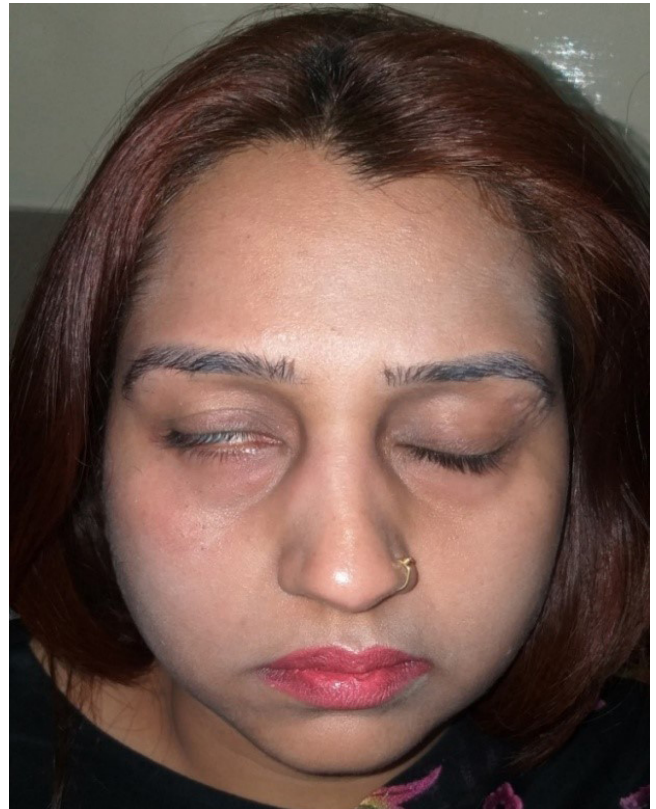


Figure-3. 1 week postoperative, showing facial nerve lags improving

DISCUSSION

Dermoid cysts are histologically derived from ectoderm and mesoderm. Tissues from endodermal origin, on the other hand, are never found in these cysts. Dermoid cysts represent only 7% of all cysts in head and neck area, and 80% of the cysts occur in Orbit, floor of the mouth and nose but are rare in parotid gland.²

These cysts can be categorized as congenital or acquired. Congenital cysts are derived from rests of embryological epithelium, while acquired result from traumatic implantation of epithelium in deeper layers.⁴

Dermoid cysts are generally asymptomatic and do not infiltrate any underlying or overlying structure like facial nerve, skin or bone. Clinical and radiographic picture of dermoid cysts is often

ambiguous and it makes pre-operative diagnosis difficult. Ultrasonography can differentiate between solid, cystic or vascular lesions. Computed tomography, Magnetic resonance imaging may help in locating the lesion and give an idea about relation of mass with surrounding tissues but cannot give a definitive diagnosis.² A fat-fluid level on Magnetic resonance imaging has been suggested as characteristic feature of a dermoid cyst.⁵

Differential diagnosis includes mucous retention cysts, parotid duct blockade, benign mesenchymal tumours like fibroma, haemangioma, neurofibroma, branchial cleft cyst, lipoma, benign and malignant salivary gland tumours like Pleomorphic adenoma, Warthin tumour, mucoepidermoid carcinoma.³

Treatment of dermoid cyst is surgical excision. Superficial parotidectomy has been performed as standard surgical treatment for intra-parotid dermoid cyst. None of these cases reported recurrence.⁶ Dermoid cysts are well encapsulated which makes dissection easy. The lumen of the cyst may also contain cheesy, yellowish-white material, which may be observed during surgery. The cyst should be removed in total to minimize the risk of recurrence.⁵

CONCLUSION

Dermoid cysts of the parotid gland are rare benign lesions which are difficult to diagnose pre operatively as their clinical and radiographic



picture is ambiguous. The encapsulated nature of these lesions makes the dissection easy for surgical excision, preserving the function of the facial nerve with very low recurrence rates.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
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2	Nabeela Riaz	Design of work, Drafting, Interpretation, Analysis, Finalizing.	
3	Saba Hanif	Interpretation Drafting analysis, Finalizing.	