



AN UNAESTHETIC HUMP ON THE FOREHEAD- CASE REPORT

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ABSTRACT

Epidermoid cyst is an extremely rare congenital disorder of the oro-facial region which results from entrapped epidermal elements without adnexal appendages in it, and are, histologically benign and slow growing. Dermoid and epidermoid cysts is seen in the oro-facial region with incidence of 7% and is less than 0.01% of all oral cavity cysts. Here we report a case of epidermal cyst in the region of anterior fontanelle.

INTRODUCTION

Epidermoid cysts are non-odontogenic cysts which are inclusion cysts lined by ectoderm. These rare lesions are derived from germinal epithelium and can be seen throughout the body, particularly in sites where embryonic elements fuse together. Mostly occurring in the ovaries and testicles, 7% occurring in the oro-facial region and 1.6% in the oral cavity, and represents 0.01% of all cysts in the oral cavity. Male to female ratio is 3:1.¹ They are indolent in nature, slow in growth and usually asymptomatic unless it is secondarily infected.² They contain a central core of keratin proteins, desquamating cells and cholesterol, and lined with stratified squamous epithelium. Epidermoid cysts commonly spread along pathways of least resistance such as natural cleavage planes and anatomic canals, extend into more than one cranial fossa and envelop the neural and vascular structures.³

CASE REPORT

A medically fit, 13-year-old patient walks to our department seeking help for an asymptomatic mass over the forehead, which was present since childhood, and had increased in size over the years (Figure 1 and 2). Patient complained of unaesthetic appearance of the face because of the lump. The patient did not show any neurological symptoms. There was no family history either. On detailed examination, the lesion was

single, well-defined seen in the forehead at the midline, measuring about 2x2 cm in its greatest diameter. Skin over the swelling was smooth and of the normal color without any secondary changes. It was firm in consistency, slightly compressible, non-tender without local rise in temperature. No dental abnormality was detected. Based on the clinical examination a provisional diagnosis of dermoid cyst was given. Epidermoid cyst, Lipoma, and sebaceous cyst were considered under differential diagnosis of this lesion.



Figure 1 & 2 Cystic lesion seen over the forehead.
Figure 3 Post- surgical photo of the patient.

Ultra sound of the lesion was carried out which revealed well defined heterogeneously hyperechoic lesion measuring approximately 25x8x27 mm in the subcutaneous plane of the forehead which was seen extending intracranially through defect in adjacent frontal bone measuring 4mm. Features were suggestive of epidermoid cyst.

The cyst was removed surgically, together with its walls (Figure 3). The histopathological exam of the lesion revealed it to be epidermoid cyst. There were no surgical complications and the patient recovered without complaints and was very happy with aesthetical results.

DISCUSSION

Roser, in 1859 first described epidermoid cyst.³ They are the developmental lesions that result from embryologic displacement of ectoderm into the meninges, ventricles, or rarely into the parenchyma of the brain.² Epidermoid cysts are usually reported in the face, trunk, neck, extremities and scalp, intra-orally- floor of the mouth is the most common site. Buccal mucosa, tongue, lips, uvula and intraosseous location within the mandible and maxilla are also reported.

Based on the pathogenesis, epidermoid cysts are classified into congenital and acquired. Congenital cysts are dysembryogenic lesions which arise from ectodermal elements trapped in between, at the time of midline fusion, of the first and second branchial arches in the third and fourth week of the intrauterine life. They may also arise from tuberculum impar of His. Acquired cyst are derived from traumatic or iatrogenic inclusion of epithelial cells or from occlusion of sebaceous gland duct. It was first noticed by Werhner in 1855 and was referred to as "Implantation cyst" by Sutton in the year 1895.^{4,5,6} The two theories for epidermoid cyst formation are firstly, occurrence of the cyst when two epidermal surfaces fuse together during early intrauterine life and ectodermal implant is retained deep inside the surface. Secondly, traumatic entrapment of surface epithelium in the connective tissue; later these cells may differentiate to form cyst.^{1,6}

Fine needle aspiration cytology (FNAC), Ultrasound, CT and MRI provides required information on the cyst location that allows optimal treatment planning.⁷ US is the first choice of specialised investigation because of its feasibility, low cost and efficacy. And this modality was used in our case. Some authors consider MRI superior to other methods, as it shows the exact position, extension and demarcation of cysts.⁸

Epidermoid cysts are insensitive to radiation or chemotherapy the treatment is surgical excision, which depends on the location, size, nearby structures and symptoms associated. Aim is to completely remove the lesion without damage to adjacent neurovascular bundles. Few doctors advocate radical excision of the lesion to prevent recurrence, and others advocate conservative approach to minimize morbidity and mortality.³ Care should be taken not to rupture the cyst, as cystic contents will act as irritants to fibrovascular tissues, causing postoperative inflammation.⁷ The epidermoid cyst rarely discloses malignancy.⁹ The occurrence of Basal cell carcinoma, and Squamous cell carcinoma has been reported in the literature that had evolved from epidermoid cyst.¹

CONCLUSION

Sufficient understanding and vigilance about this slow growing swelling is very important not only because of the symptoms it causes but also because of its malignant potential.

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