Giant Keratinous Cyst of the Scalp

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Case Report

ABSTRACT

Giant keratogenous cysts are rare and mimic other common benign lesions in the head and neck area. The giant cysts have tendency for malignant change. We report a case of a giant keratogenous cyst in the scalp area of a middle aged female which mimicked lipoma /Plexiform neurofibroma on clinical examination. Complete surgical excision was done, and on histology examination, the final diagnosis of Keratinous cyst was made. The follow-up period of 06 months is normal. Kerarogenous cysts are either congenital or acquired.

KEY WORDS: congenital cyst, giant cyst, keratogenous cyst, scalp

INTRODUCTION:

Keratogenous cysts are lined by stratified epithelium, which may keratinize either with the formation of keratohyalin granules, forming a horny material resembling the epidermis or without the formation of keratohyalin, forming trichilemmal keratin. The former variety is coined as epidermoid cysts, and the latter one as Trichilemmal cysts. An epidermoid cyst is formed by the proliferation of epidermal cells within a circumscribed dermal space with retention of keratinous debris and cholesterol or sebaceous materials. These cysts are either congenital or acquired[1]. In the past, these cysts were also known as sebaceous cysts. However, now the term "sebaceous cyst" has fallen into disuse as the analysis of the lipids from epidermal cysts by thin layer chromatography reveals characteristic patterns of lipid classes which resembled much more closely to the lipid pattern of epidermis than that of the sebaceous gland. This data provides biochemical support for the view that none of the epidermal cysts is of sebaceous origin[2]. Current terms include epidermal cyst, keratin cyst, epithelial cyst, and an epidermoid cyst.

Epidermal/keratogenous cysts are asymptomatic. Conventional epidermal cysts are less than 5 cm in diameter. Giant epidermal cysts with a diameter of 5 cm or more are rare but have been reported [3]. We report a case of a giant keratogenous cyst on the postero-lateral scalp.

CASE REPORT:

A 50 year old female patient was brought to People's College of Medical Sciences & Research Centre, Bhopal with a huge mass on the head, hanging from the right side of scalp and reaching upon the right shoulder. The patient narrated that this was present since days of her childhood which gradually increased to the present size. The swelling was painless and was gradually enlarging. Since past 4 days it has a small opening in the dependent part with some discharge. On clinical examination, there was a solitary sessile non-tender, soft, non-pulsatile, non-inflamed swelling in the right posterior parietal region of scalp extending down over the right occipital region, and measuring length 56 cm X width 22 cm X breadth 14 cm. The equatorial circumference of the cyst as measured 46 cm (Figure 1 & 3). The skin overlying the swelling was normal in color and texture but slightly stretched. In the center of the swelling there was a small opening with whitish thick paste like discharge on applying pressure. It was mobile over the underlying structures. On radiographic examination, a soft tissue shadow of

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Figure 1: Patient presented with swelling over right side of the head.

the swelling appearing almost equal to the size of the skull frame was visualized at the occipital region without any bony erosion (Figure 4 & 5). Based on the clinical findings diagnosis of Epidermal Cyst was made. Surgical excision of the cyst was planned under general anesthesia. But, as endotracheal intubation was not possible due to difficult airway, we operated under local field block anesthesia and incision site infiltration with Bupivacaine 0.25% with adrenaline (1:200000), with GA anesthesia standby, and preparation for tracheotomy if needed with explained consent of the relatives. The cyst was completely excised. The underlying occipital and posterior parietal bones were normal. There was no adjacent infiltration in the tissues. The gross appearance of the mass showed that it had an outer membranous capsule with inner yellow and brown debris (Figure 2). The cystic lumen was filled with degenerated and necrotic keratinaceous debris. The histopathlogy was 'Kearatogenous cyst'.

DISCUSSION:

Keratogenous cysts are common subcutaneous tumors that usually involve the scalp, face, neck, back, or trunk. The cysts grow in volume due to the accumulation of epithelial and keratinous debris. A giant cyst with a diameter of 5cm or more is rare. Owing to huge size it can rupture, which can induce infection. The large size and its weight causes discomfort, compressive symptoms on adjacent tissues, and cosmetic disfigurement. Our patient had a pin-hole size rupture with intermittent leak of grayish-white like material from the swelling. The largest dimensions of the swelling, we could get form the goggled literature search was described by Sang-oon et al [4]. In our patient the dimensions of the swelling were length 56cm X width 22cm X breadth 14cm. The equatorial circumference of the cyst measured 46cm. (Figure 1). They reported mass of 15 × 15 × 8 cm epidermoid cyst over the face in 83 year old lady.

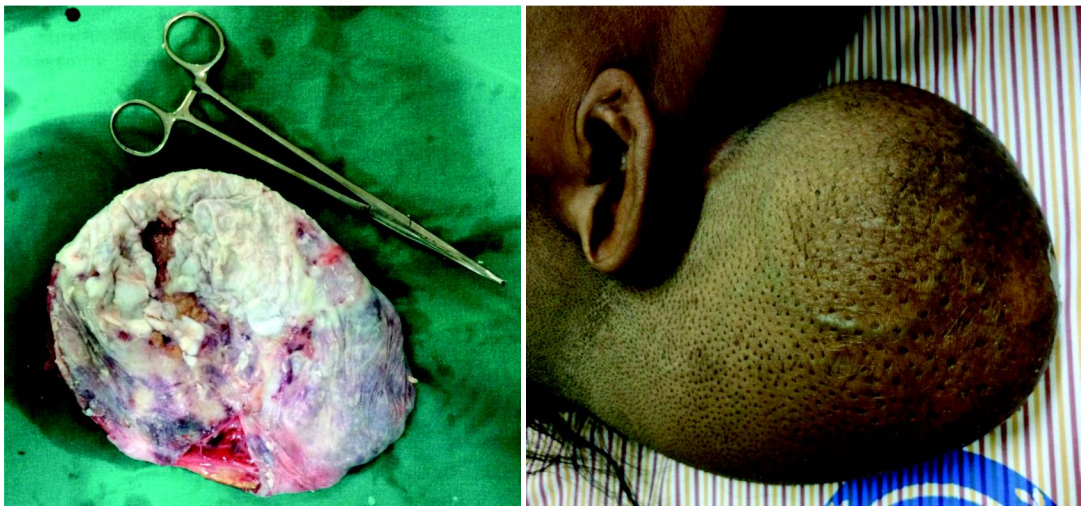

Figure 2 & 3: X Ray Head showing massive soft tissue swelling

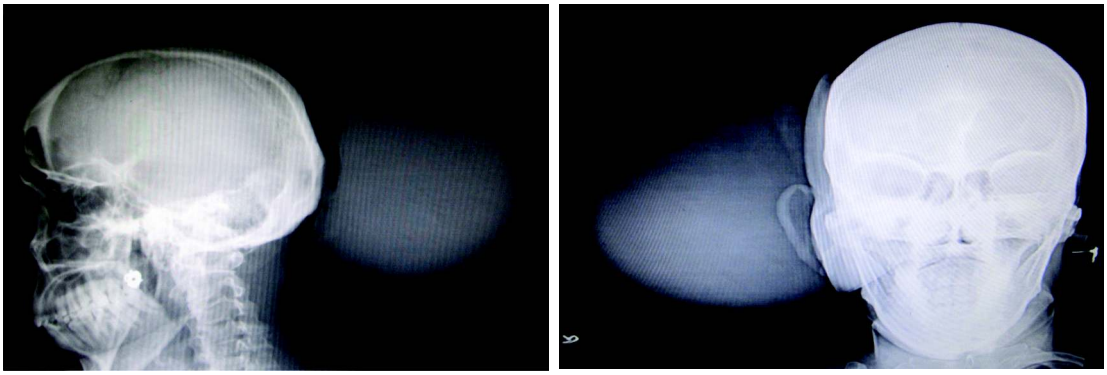

Figure 4 & 5: Patient after removal of the cyst.

The large size cysts have a potential for malignant transformation, which causes local infiltration, and sometimes metastasis. Apart from the overall malignant transformation rate, which varies from 0.033% to 9.2% in some articles[5] to 1.5–10% in others[6],certain other complications for these cysts are infection, Cock's peculiar tumor, abscess, cutaneous horn, which make this cyst an important diagnostic entity[7,8]. Our case did not have any features of malignancy, and was excised completely and had no features of local infiltration or any distant metastasis.

The congenital epidermal cyst may be formed by trapping of displaced embryonic epithelial rests commonly occurring in the head and neck area[3]. They may be acquired secondary to implantation of the epithelium secondary to trauma or postsurgical or from occlusion of the pilosebaceous unit. Human papillomavirus (HPV) type 57 or 60 infections may be additional factors in the development of a palmoplantar epidermoid cyst[9]. Epidermoid cysts are also seen in patients with Gardner syndrome, particularly on the face and scalp[1]. They are also seen in basal cell nevus syndrome, and pachyonychia congenital[7].

CONCLUSION:

Giant keratogenous cysts mimic other common benign lesions in the head and neck area. Therefore, a thorough clinical, radiological, and pathology investigation is essential for the diagnosis of these cutaneous lesions as they differ in their biologic behavior, treatment, and prognosis.

The present case demonstrates that giant keratogenous cysts may grow for long durations of time and produce adverse effects due to the pressure exerted and may undergo central pressure necrosis. Owing to the potential of malignant transformation and other complications, early surgical excision is recommended for patients exhibiting giant keratogenous cysts. Further, it is essential that every cyst excised from the skin should be closely studied, especially the large masses, although the clinical diagnosis may be simply sebaceous cyst.

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