An Unusual Presentation of Gaint Sebaceous Cyst over the Back: A Case Report.

Neel Doshi[1], Pratik Gond[1], Tanisha Prasad[2], and Abhigan Shrestha[3]

[1]Pravara Institute of Medical Sciences (Deemed to be University)
[2]Royal College of Surgeons in Ireland
[3]M Abdur Rahim Medical Medical College Hospital

October 9, 2023

Introduction:

Sebaceous cysts, often known as epidermoid cysts, are keratin-containing unilocular retention cysts. It frequently appears on the head, neck, scalp, scrotum, earlobe, and breast, and can range in size from a few millimetres to less than a few centimetres. When an epidermal cyst exceeds more than 5 cm in diameter, it is considered a giant cyst. The development of cancer is more likely in giant epidermal cysts, which are uncommon.[1]

Conventional sebaceous cysts are typically small, slowly expanding, non-sensitive lesions with a dome shape. Unless it becomes infected or enlarges to the point where it damages nearby anatomical structures, an epidermal cyst is typically asymptomatic. Authors have previously described enormous epidermal cysts with diameters greater than 5 cm.[2,3]

A well-developed granular cell layer lines epidermoid cysts, which are also lined by stratified squamous epithelium. On rare occasions, the cyst wall may also contain pseudostratified ciliated columnar epithelium. The cyst wall may have calcification of a dystrophic type. The preferred course of action is excision. Studying the occurrence of enormous sebaceous cysts was the goal.[4]

Epidermal inclusion cysts, ganglion cysts, neurogenic tumors, myxoid tumors, nodular fasciitis, and dermatofibrosarcoma protuberans are among the possible diagnoses. The reported incidence of malignant degeneration to squamous-cell carcinoma is 2.2%. [5]

The present study reported a case of a giant sebaceous cyst over the posterior upper back in a 75-year-old male.

Case Report:

A 75-year-old male patient came to the outpatient surgery department at Pravara Rural Hospital in Loni complaining of a 5-year-old swelling that had been gradually getting worse over the left upper back and shoulder region. History showed that the swelling was approximately 1 cm in size when he first noticed it a few months ago but gradually grew in size until it reached a large one. For six months, he also experienced discharge from the swelling.

An extensive multi-lobulated soft cystic swelling measuring 20 cm by 17 cm by 10 cm was found during a clinical examination of the swelling over the left upper back and shoulder (Figure 1). There was a cream-coloured discharge that had the consistency of butter and was oozing from the swollen punctum.

The patient's ultrasound results showed a large, well-defined, lobulated, heterogeneous hypoechoic lesion with numerous small calcifications on the left upper back region (Figure 2). The Doppler study revealed no

internal vascularity or a solid component within the swelling's underlying aetiology. In the subcutaneous plane of the cervical region and upper back region on the left side, there was a multi-lobulated area of altered signal intensity that measured roughly 8.5 10.4 14.8 cm (AP TR CC), appeared hyperintense on T2W and STIR images, and appeared hyperintense on T1W images. DWI showed diffusion restrictions in these regions. Indistinct fat planes with the trapezius are visible anteriorly. The trapezius was displaced laterally, anteriorly, and posteriorly over the skin as a result of this lesion. A thin peripheral enhancement was discovered during the post-contrast study. Fat in the vicinity seems normal. Findings that could point to sebaceous cysts.

Management and Outcome:

The specimen's histopathology revealed a cyst with a stratified squamous epithelium lining that contained keratin (Figure 3). Histopathology has not revealed any malignant changes. The patient was intubated under general anaesthesia an oblique elliptical incision was made around the swelling. Incision deepened up to the cyst wall and a total skin flap was excised from the cyst and underlined muscle and haemostasis was achieved. Romovac drain was inserted and the skin was closed with Ethilon 2-0 mattress sutures(Figure 4). After the cystic mass has been removed, excess skin is removed to promote primary closure and aesthetic improvement. A day after surgery, the patient was released, and on the third day of follow-up, there were no complaints. On the tenth postoperative day, the stitches were removed after the wound healed without any complications. At the follow-up examination at regular intervals of 15 days, the authors found no local recurrence of the lesion.

Discussion:

Epidermoid cysts are benign, slow-growing, high, round, firm, subcutaneous, or intradermal cysts that typically grow 1-5 cm in diameter and are usually asymptomatic. It is noteworthy that an epidermoid cyst with a diameter [?]5 cm is rare. [6]

Rarely do giant sebaceous cysts or epidermoid cysts appear in surgical practises. These are rare before puberty but can happen at any age. Young adult males are the most common age of presentation. The face, trunk, neck, scalp, scrotum, ear lobe, and breast are the most frequent sites of occurrence, but occurrence at an unusual site is cause for concern. [4]

Epidermoid cysts with increased sizes are more brittle and prone to secondary infection. Another crucial point is that the patient may experience depression and anxiety due to the lesion's aesthetic appearance if these enormous cysts appear in the head or neck due to the high visibility of these areas. [7]

A massive epidermal cyst, which is uncommon in surgical practice. According to pathology, the cornified epithelium-lined epidermal cyst has a distinctive granular layer, and lamellated keratin, and is not calcified. There are three different types of lesions: 1) congenital sequestration of surface ectoderm, 2) pilosebaceous unit occlusion, and 3) implantation of epidermal cells into the dermis as a result of surgical intervention and puncturing injury.[8]

In our case, there were no clinical indications of infection. Since there was no nodal involvement and the lesion was benign, neoplastic conditions were ruled out. Lipomas and salivary vascular lesions are additional conditions to consider, but with the aid of a thorough physical examination and additional tests like ultrasound, and MRI we were able to rule out these other pathological conditions. Importantly, there are reports of malignant changes in epidermoid cysts in the literature. In our case, the pathology-analysed specimen revealed no malignancy.

Although epidermoid cysts have a benign clinical course, there have been a few isolated reports of basal cell carcinoma, squamous cell carcinoma, epithelioid carcinoma, and other malignancies being linked to these cysts. In order to ensure complete removal and prevent recurrence, complete surgical removal is the preferred course of treatment. To get good aesthetic results for giant epidermal cysts, redundant skin must be removed.[8]

A sebaceous cyst is completely removed along with its capsule as part of the treatment. In one of the few cases to date presented in the literature, the authors describe a rare instance of a massive epidermal cyst that covered the back and required total excision. FNAC typically makes a diagnosis. In order to establish the diagnosis in unusual locations, MRI is a helpful adjunct. Simple excision is the preferred procedure in uncomplicated cases, but regional perforator island flap reconstruction has been used in patients with large epidermal cysts and underlying medical conditions. The outcome of these flaps is determined by the underlying illness and any coexisting diseases.[4,9]

Conclusion:

Despite being a benign, slow-growing tumour, the epidermal cyst can make diagnosis challenging. In this case, the authors show that a giant epidermal cyst can grow for a long time and have negative effects on the surrounding structures as well as serious cosmetic issues that may call for mental health counselling. Therefore, for patients with a giant epidermal cyst, early surgical excision is advised. We thus hope to add to the existing body of scientific literature.

Data availability statement: Not applicable.

Funding statement: No funding was received for this study.

Conflict of interest disclosure: None declared.

Ethics approval statement: Not applicable.

Patient consent statement: Formal written consent was obtained from the patient's parents for drafting this manuscript.

Permission to reproduce material from other sources: Not applicable.

Clinical trial registration: Not applicable.

Consent statement: Informed written consent has been taken from the patient and will be provided on request.

Acknowledgement: No authors have been funded for this manuscript.

Author contribution: All authors contributed equally.

References:

1. 1.Wani I, Jawaid H, Mir SR, Wani AM, Shah PS, Peerzada AH, et al. Giant epidermoid cysts OA Case Reports. 2013; 2(7):65
2. 2. Kang SG, Kim CH, Cho HK, Park MY, Lee YJ, Cho MK. Two cases of giant epidermal cyst occurring in the neck. Ann Dermatol. 2011;23(Suppl 1):S135–S138.
3. 3. Golshan Momeni M, Anavim A, Lin F, Tehranzadeh J. Giant epidermal inclusion cyst of buttock. Skeletal Radiol. 2006;35:864–866.
4. 4. Bansal N, Vergadia A, Mashke AN, Datey A. A rare case of a giant epidermal cyst over the back. Int J Res Med Sci 2020;8:1169-71.
5. 5. Haflah MN, Kassim MA, Shukur HM. Giant Epidermoid Cyst of the Thigh, Malaysian Orthopaedic Journal. 2011; 5(3):17-9.
6. Gaetti Jardim, E. C., Masocatto, D. C., Oliveira, M. M., Macena, J. A., & Teixeira, F. R. (2017). Epidermoid Cyst: Clinical and Surgical Case Report. Annals of Maxillofacial Surgery, 7(1), 151-154.
7. Park TW, Kim JK, Kim JR. Giant epidermal cyst in the posterior neck developing over 40 years: A case report. Exp Ther Med. 2014;7:287–9.
8. Kereh, David and Septiman, Septiman (2019) "A Rare Presentation of A Giant Epidermal Cyst of The Parietooccipital Region: A Case Reports," The New Ropanasuri Journal of Surgery: Vol. 4 : No. 2 , Article 9. DOI: 10.7454/nrjs.v4i2.1052

9. Houdek MT, Warneke JA, Pollard CM, Lindgren EA, Taljanovic MS. Giant epidermal cyst of the gluteal region. Radiol Case Rep. 2010 Jan 1;5(4):476.

Figure legend:

Figure 1: Multi-lobulated soft cystic swelling measuring 20 *17 *10 cm swelling over the left upper back and shoulder

Figure 2: ultrasound results showed a large, well-defined, lobulated, heterogeneous hypoechoic lesion with numerous small calcifications

Figure 3: histopathology revealed a cyst with a stratified squamous epithelium lining that contained keratin.

Figure 4: Romovac drain was inserted and the skin was closed with Ethilon 2-0 mattress sutures

Hosted file

`fig 1.docx` available at https://authorea.com/users/672606/articles/671606-an-unusual-presentation-of-gaint-sebaceous-cyst-over-the-back-a-case-report

Hosted file

`fig 2.docx` available at https://authorea.com/users/672606/articles/671606-an-unusual-presentation-of-gaint-sebaceous-cyst-over-the-back-a-case-report

Hosted file

`fig3.docx` available at https://authorea.com/users/672606/articles/671606-an-unusual-presentation-of-gaint-sebaceous-cyst-over-the-back-a-case-report

Hosted file

`fig4.docx` available at https://authorea.com/users/672606/articles/671606-an-unusual-presentation-of-gaint-sebaceous-cyst-over-the-back-a-case-report