|| Print ISSN: 2589-7837 || Online ISSN: 2581-3935 ||
International Journal of Medical Science and Diagnosis Research (IJMSDR)
Available Online at www.ijmsdr.com
NLM (National Library of Medicine ID: 101738824)
Case Report Volume 4, Issue 4; April: 2020; Page No. 10-13

GIANT EPIDERMAL INCLUSION CYST OF THE GLUTEAL REGION – A RARE CASE REPORT

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Conflicts of Interest: Nil
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Abstract:
Epidermal inclusion cysts are a very common type of benign intradermal or subcutaneous tumors .They occur as a result of the migration of epidermal cells into the dermis .These lesions are typically small, solitary, and slow-growing, located on the trunk, face, scalp and neck. Larger masses have been reported infrequently on the extremities. Here we present a rare case of a giant (13*15*17cm) epidermal inclusion cyst of the left gluteal region in 23 years of female which presented a diagnostic dilemma preoperatively due to its size, location and MRI findings. The cyst was subsequently excised in its entirety along with its wall and primary closure was done with drain placement. The patient recovered well and the diagnosis was confirmed by histopathological examination of the resected specimen.
Keyword: giant epidermal inclusion cyst, gluteal region, tailgut duplication cyst

Introduction

Epidermal inclusion cyst (epidermal cysts or epidermoid cysts), are a very common type of benign intradermal or subcutaneous tumors .They occur as a result of the migration of epidermal cells into the dermis1. They are lined with stratified squamous epithelium. These lesions are typically small, solitary, and slow-growing, located on the trunk, face, scalp and neck, with uncommon cases of larger masses reported on the extremities2-4. There have also been a few reports of epidermal inclusion cysts occurring in the bones, breast or genitalia5-7.The overlying skin may or may not show a surface punctum .Their size varies from mm to a few cm, with sizes of above 5cm called as giant epidermal inclusion cysts.

In most cases, epidermal inclusion cysts can be diagnosed clinically. In cases of giant cysts or when the clinical diagnosis is challenging, MRI with and without contrast is the preferred imaging modality for their evaluation3.On MRI, uncomplicated lesions have been reported to have high signal intensity on T2-weighted/fluid-sensitive sequences, with no enhancement or thin-rim enhancement .The differential diagnosis includes lipomas, ganglion cyst, neurogenic tumor, myxoid tumor, nodular fasciitis,

and dermatofibrosarcoma protuberans .In our case, owing to its location and MRI findings, a tail gut duplication cyst was also a differential . Malignant degeneration to squamous-cell carcinoma is rare, but has been reported in a few cases of giant epidermal cysts, particularly in older population and in patients with a giant cyst size. Once the diagnosis of an epidermal inclusion cyst is confirmed on histology, the treatment of these cysts is most commonly excision. These cysts have morphologically a smooth well defined wall with putty like foul smelling material. They have a very high propensity for recurrence if removed incompletely. The cyst should be removed in its entirety along with its wall to prevent the recurrence.

Here we present a case of a giant epidermal inclusion cyst likely the largest reported which presented a diagnostic challenge due to its location and MRI findings.

Case report

A 23 year old Lady presented to the OPD with a swelling over the left gluteal region for the past 8 months. The swelling was gradually progressive in size, not associated with pain but was causing discomfort while sitting and while lying supine. The patient had previously undergone excision for a swelling at the same site 1.5 years ago regarding which there were no medical records available.

On examination there was a diffuse swelling over the left buttock. Its lateral, inferior and superior borders were well defined and regular but the medial margin could not be appreciated. It measured about 16cm in transverse and 14cm in craniocaudal directions. The skin above the swelling was unremarkable the surface smooth, consistency was firm. The swelling appeared to be present in the subcutaneous plane and became more prominent on tensing the muscle. On per rectal examination, the lesion was indenting the posterior and left lateral wall of the

rectum.A clinical diagnosis of a benign soft tissue tumour – likely lipoma /fibroma was made.

An MRI study of the pelvis was done which showed a well defined cystic lesion measuring

11.8*13.6*17.1mm in retro rectal region displacing the rectum anteriorly.The lesion extended inferiorly along the rectum, anal canal and left ischiorectal fossa.The lesion was hypointense on T1 and hyperintense on T2 and STIR, the MRI suggested a diagnosis of tailgut duplication cyst. An FNAC of the swelling was done which suggested an epidermal inclusion cyst

The patient was duly taken up for elective surgery. Excision was done under general anesthesia. Intra operatively, a large epidermal inclusion cyst of size 13*15*17cm was present in the left gluteal region. It extended from the subcutaneous plane to the ischiorectal fossa and was closely abutting the rectum without any communication with it. The Cyst was removed in its entirety along with its wall. It contained around 800ml of putty like material.The cavity was thoroughly washed, dead space was obliterated , negative suction drain was placed and the incision closed in layers.

The drain was removed on POD 3 and patient was discharged on POD 4. The patient presented on post op day 7 with a seroma which was successfully aspirated. The sutures were removed on POD 12 and the patient had a normal recovery. The histopathology report confirmed the diagnosis of an epidermal inclusion cyst.

Figure 1: Preoperative image of the left gluteal region swelling

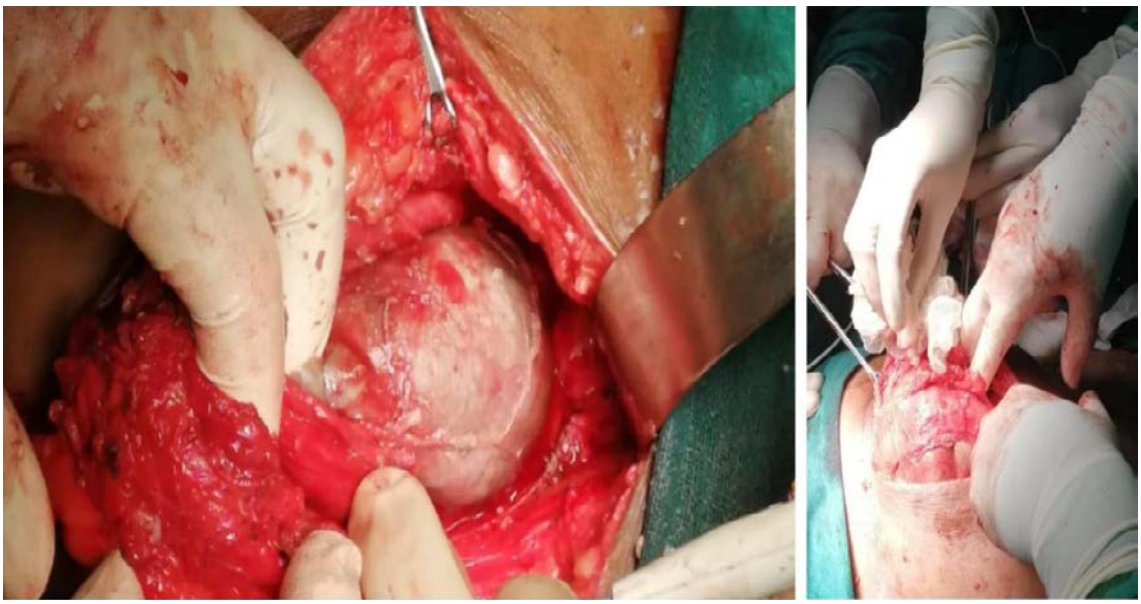

Figure 2: Intraoperative image of the epidermal inclusion cyst

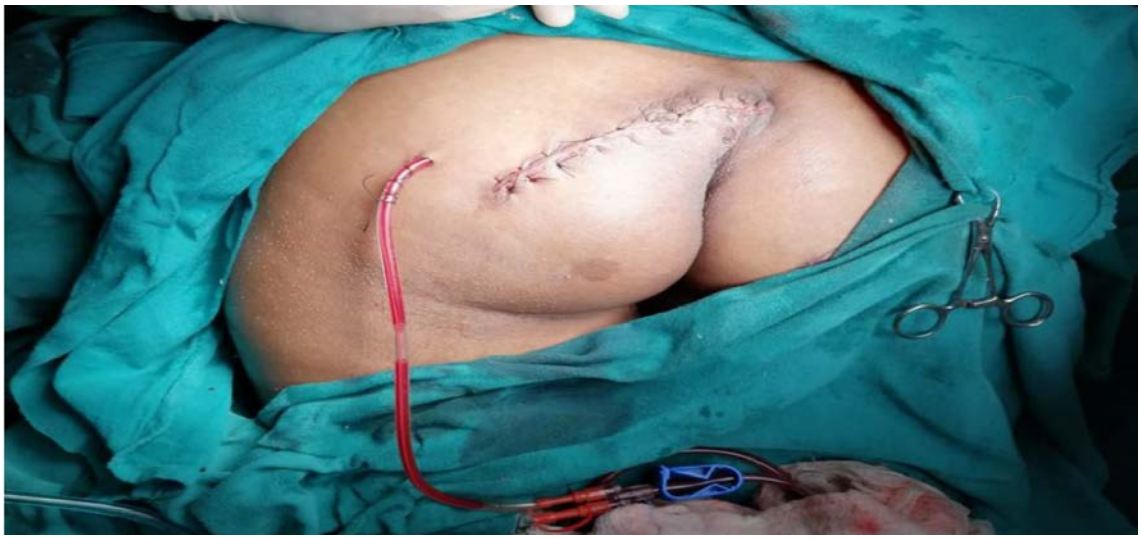

Figure 3: Primary closure of the defect after drain placement

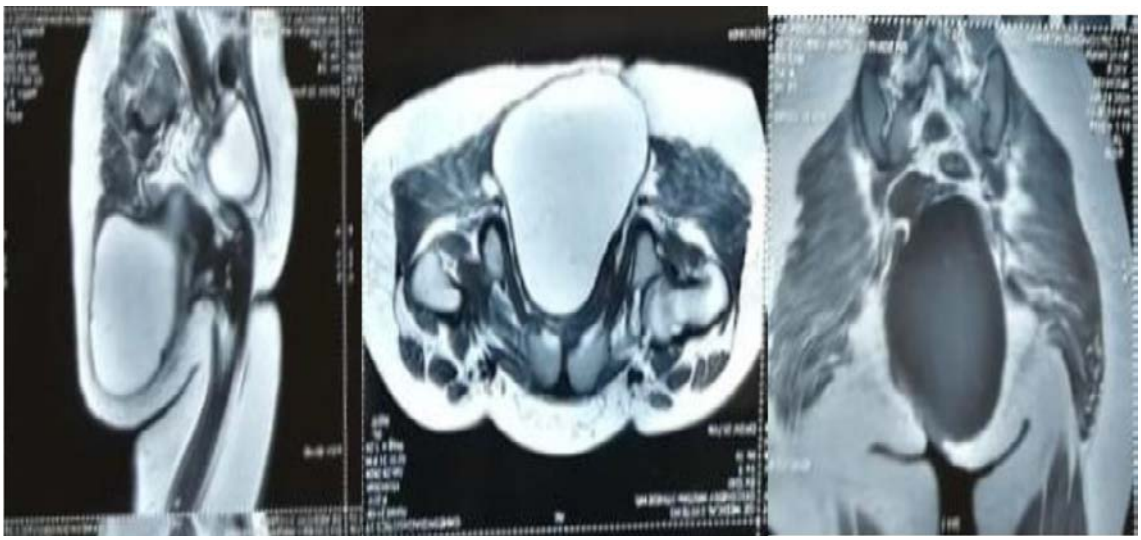

Figure 4: MRI images of the tumour

Discussion

We report a giant epidermal inclusion cyst of the gluteal region in a 23 year old female patient extending into the ischiorectal fossa measuring about 12*17*20cm. Giant epidermal cysts have been reported in the gluteal region, occipital region3,8 .Most cysts have been reported in an older population and in males2,9 .Singh DP et all reported a large cyst of the gluteal region in a 56 year old female15.The largest cyst reported so far measured 17.8 × 13.18 × 5.8-cm2.Our case appears to be the largest epidermal inclusion cyst reported in the gluteal region in english literature.There was a history of trauma at the site of cysts in a few case reports10 .The trauma might have caused ingraining of the epidermal cells into the dermis and subcutaneous space.

Rare cases of malignant transformation have been reported, particularly in cases of large size.The incidence is estimated to be about 2.2%11 .S Debaize et all reported a case of squamous cell carcinoma in situ in a cyst measuring 20*15*12cm in a 38 year old female8.Our case was characteristically a benign swelling, an epidermal inclusion cyst with histological features of a cyst wall lined by stratified squamous epithelium with a granular layer with sebaceous material within. Owing to its location and MR findings, we also made a differential diagnosis of tailgut duplication cyst preoperatively. But as the cyst wall did not have any type of intestinal epithelial lining, and had no communication with the gastrointestinal tract, this diagnosis was ruled out. In patients having multiple epidermal inclusion cysts, one should keep in mind the possibility of Gardner syndrome.Its exclusion is important, as in such cases gastrointestinal malignancies occur.

Treatment modalities vary, from laser marsupialization to simple excision, but there are no clear guidelines regarding

the treatment of choice 12,13.Most previous cases have been treated by excision and primary closure as was done by us. The entire cyst wall must be meticulously removed in order to prevent recurrence.Kim SW et all described the use of perforator flaps for the coverage of wounds after removal of giants cysts of the gluteal region14.

Conclusion

We report a 13*17*20 cm giant epidermal inclusion cyst in the left gluteal region of a 23 year old female patient that was treated by excision and primary closure.

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