Global Academic Journal of Medical Sciences

Available online at www.gajrc.com
DOI: 10.36348/gajms.2022.v04i01.005

ISSN: 2706-9036 (P)
ISSN: 2707-2533 (0)

Case Report

Rare Case of Giant Coccygeal Epidermoid Inclusion Cyst in Adult – A Case Report

Dr. Parthasarathi Hota[1*], Dr. Kiran Kumari[2]

[1]Assistant Professor, Department of General Surgery Pacific Institute of Medical Sciences Udaipur, India
[2]Junior Resident Department of General Surgery Pacific Institute of Medical Sciences Udaipur, India

***Corresponding Author**
Dr. Parthasarathi Hota
Assistant Professor, Department of General Surgery Pacific Institute of Medical Sciences Udaipur, India

Article History
Received: 12.01.2022
Accepted: 19.02.2022
Published: 24.02.2022

Abstract: Epidermal inclusion cysts are the most common cutaneous cysts. Numerous synonyms for epidermal inclusion cysts exist, including epidermoid cyst, epidermal cyst, infundibular cyst, inclusion cyst, and keratin cyst. These cysts typically present as nodules directly underneath the patient's skin, and often have a visible central punctum. They are usually freely moveable. The size of these cysts can range from a few millimeters to several centimeters in diameter. Though can occur anywhere in the body, cysts in retrorectal or coccygeal region is quite rare, particularly in adults. Here we present a case of large coccygeal epidermoid inclusion cyst in an elderly lady.

Keywords: Epidermoid inclusion cyst, coccygeal epidermoid cyst, epidermal cyst, inclusion cyst.

INTRODUCTION

Epidermal inclusion cyst occurs as a result of migration of epidermal cells into dermis, lined with stratified squamous epithelium. These lesions are typically small, solitary and slow growing, located on the trunk, face, neck, with uncommon cases of larger masses reported on extrimities [1-5]. 80% of epidermoid cysts are reported in ovaries and testicles; 7% being reported to occur in head and neck region; 1.6% is reported in oral cavity [6-8]. It is commonly asymptomatic; however, it may become symptomatic due to secondary infection or when it reaches to dimensions that can cause damage to the surrounding anatomical structures [9]. Epidermoid cysts are frequently occurring benign cysts all over the body and their presence in the retrorectal or precoccygeal region is very rare, being very uncommon in adults [10]. We here outline a case with rare presentation over coccygeal region in an adult.

CASE REPORT

A 71-year-old female patient reported to outpatient department with complaint of large swelling posterior to anal opening. Patient noticed swelling 1 year ago, which was initially small in size, but gradually increased to current size of approx. 7cm*4cm, making her uncomfortable to sit and lie supine. Patient denied prior history of trauma or any surgical procedure. No complaints of discharge from swelling. No history of fever, chills, weight loss. Patient has no contributory history of diabetes and hypertension.

On clinical examination a well circumscribed, solitary, round swelling was seen lying just below coccyx and posterior to perianal region almost 1 cm away from anal opening. On inspection skin over the swelling was stretched, shiny with no dilated veins and no obvious punctum was seen to be present over swelling. On palpation, the swelling was approx. 7cm* 4cm, found to be soft,

cystic, mobile with no discharge coming out of swelling and no abnormality was detected on per rectal examination.

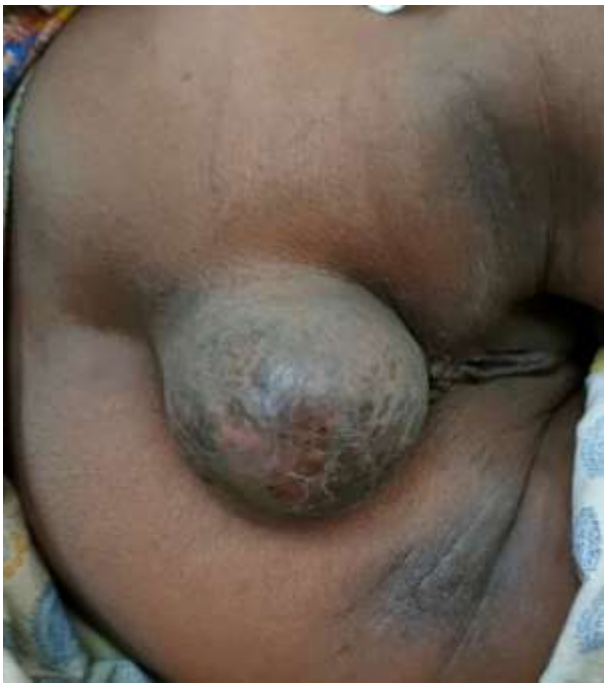

Fig-1: Clinical photograph showing large swelling over the coccygeal region

Differential diagnosis included both benign and malignant soft tissue tumors, which prompted MRI examination for further characterization of lesion and to rule out any communication with spinal cord and rectum. MRI of pelvis was performed using serial sections of T1w, T2w and STIR sequences in multiple planes on dedicated quadrature body coil. Findings showed well defined abnormal signal intensity lesion noted in subcutaneous planes in midline posterior to perianal region and below the coccyx measuring approx. 5.7*6.3*9.5cm (AP*TR*SI) in size. Lesion appears iso to hyperintense to muscle on T1W1 and hyperintense on T2W1. STIR section shows thin fibrous connection with coccygeal region. Lesion does not show communication with spinal cord and rectum.

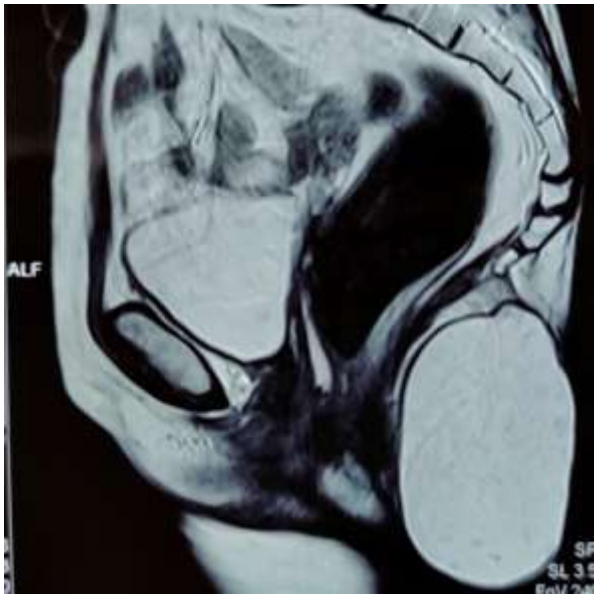

Fig-2: MRI shows the cyst has no communication with the rectum or spinal canal

In addition to benign subcutaneous cystic lesion such as giant epidermoid inclusion and sebaceous cyst the differential diagnosis also includes soft tissue sarcoma.

Due to size and location of mass that was causing patient's discomfort and clinical concern for possibility of underlying malignancy, surgical excision of lesion followed by biopsy was planned.

Patient was posted for excision under spinal anesthesia after routine investigations which were essentially normal.

Fig-3: Operative photograph after complete excision

Excised lesion was sent for histopathological examination to confirm the diagnosis. Microscopic findings from sections of cyst wall showed cyst lined by squamous epithelium, keratin flakes and nucleated squamous cells. Subepithelial tissue shows abundant congested blood vessel area of hemorrhage and inflammatory cell infiltrate suggestive of epidermal inclusion cyst.

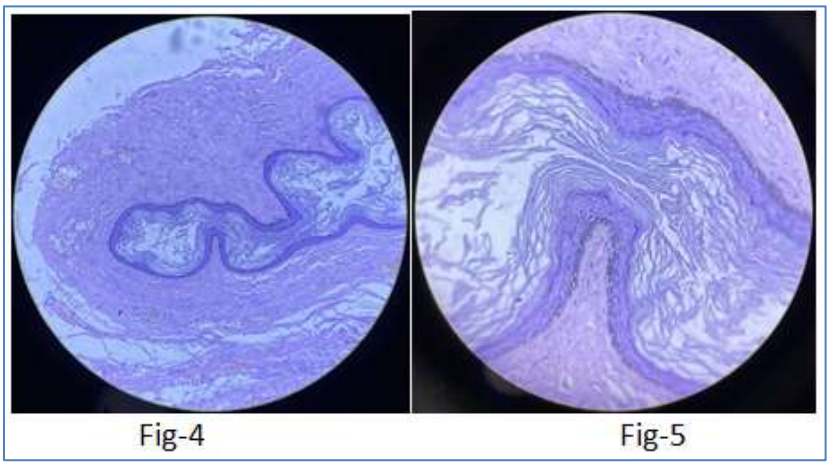

Fig-4, 5: ***Histological sections of the cyst***

Post-operative recovery was uneventful. Patient was discharged in satisfactory condition after 3 days. She came for follow-up a week later with a healed wound.

DISCUSSION

Epidermoid and dermoid cysts are known to result from defective closure of the ectodermal tube, which results in inclusion of skin with or without accessory appendages which are lined by stratified squamous epithelium. They are well circumscribed with thin layer of connective tissue and filled with thick yellow green fluid containing a mixture of desquamated debris, cholesterol, keratin and water. Epidermoid cysts have no skin appendages whereas dermoid cysts contain them [10].

Retrorectal tumours are heterogeneous lesions confined to the space in front of the lower part of the sacrum and coccyx [10-11]. Uhlig and Johnson gave classification for retrorectal tumours and modified by Lovelady and Dockerty. According to this classification, retrorectal tumours are divided into 5 categories: congenital, inflammatory, neurogenic, osteogenic and others [12, 13].

The study conducted by Whittaker and Pemberton between 1922 and 1936 reported 22 retrococcygeal tumours. Of these, 10 were benign (9 dermoid cysts and 1 fibroma), and the remaining tumours were malignant. An epidermoid cyst was not detected in any of the cases in the study [14].

The precise diagnosis and appropriate treatment are very important for tumours in this region because an incorrect or insufficient first surgical treatment can complicate further management like risk of recurrence and faecal incontinence. Prognosis and outcome of these lesions is excellent, with a recurrence rate of only 3% [15, 16].

In this case, due to the rare anatomical location of cyst it prompted us to do definitive diagnosis by completely excising it. MRI pointed out the cystic swelling in coccygeal region to be most likely benign and not communicating with spinal column or rectum. Literature confirms that epidermoid cysts in the retrorectal region are very rarely seen. Our case was a 71 year old female patient with coccygeal epidermoid inclusion cyst. As per our literature search, we found very few articles on coccygeal cysts in adults presenting with asymptomatic masses.

CONCLUSION

Epidermoid inclusion cyst or epidermal cyst is a common disorder seen in surgical outpatient departments. Midline coccygeal epidermal inclusion cysts are very rare particularly in adults. Complete excision should be done after ruling out communication with rectum and spinal canal.

REFERENCES

1. Denison, C. M., Ward, V. L., Lester, S. C., DiPiro, P. J., Smith, D. N., Meyer, J. E., & Frenna, T. H. (1997). Epidermal inclusion cysts of the breast:

three lesions with calcifications. *Radiology*, *204*(2), 493-496.
2. Fujimoto, H., Murakami, K., Kashimada, A., Terauchi, M., Ozawa, K., Nosaka, K., & Arimizu, N. (1993). Large epidermal cyst involving the ischiorectal fossa: MR demonstration. *Clinical imaging*, *17*(2), 146-148.
3. Handa, U., Chhabra, S., & Mohan, H. (2008). Epidermal inclusion cyst: cytomorphological features and differential diagnosis. *Diagnostic cytopathology*, *36*(12), 861-863.
4. Golshan Momeni, M., Anavim, A., Lin, F., & Tehranzadeh, J. (2006). Giant epidermal inclusion cyst of buttock. *Skeletal radiology*, *35*(11), 864-866.
5. Shibata, T., Hatori, M., Satoh, T., Ehara, S., & Kokubun, S. (2003). Magnetic resonance imaging features of epidermoid cyst in the extremities. *Archives of orthopaedic and trauma surgery*, *123*(5), 239-241.
6. Ozan, F., Polat, H. B., Ay, S., & Goze, F. (2007). Epidermoid cyst of the buccal mucosa: a case report. *J Contemp Dent Pract*, *8*(3), 90-96.
7. Pancholi, A., Raniga, S., Vohra, P. A., & Vaidya, V. (2006). Midline submental epidermoid cyst: A Rare Case. *Internet J Otorhinolaryngol*, *4*(2), 1-2.
8. Kandogan, T., Koç, M., Vardar, E., Selek, E., & Sezgin, Ö. (2007). Sublingual epidermoid cyst: a case report. *Journal of Medical Case Reports*, *1*(1), 1-4.
9. Park, T. W., Kim, J. K., & Kimb, J. R. (2014). Giant epidermal cyst in the posterior neck developing over 40 years: A case report. *Experimental and therapeutic medicine*, *7*(1), 287-289.
10. Turkay, R., Caymaz, I., Yildiz, B., Livaoglu, A., Turkey, B., & Bakir, B. (2013). A rare case of epidermoid cyst of perineum: Diffusion-weighted MRI and ultrasonography findings. *Radiology Case Reports*, *8*(1), 593.
11. Baek, S. W., Kang, H. J., Yoon, J. Y., Whang, D. Y., Park, D. H., Yoon, S. G., ... & Kim, K. Y. (2011). Clinical study and review of articles (Korean) about retrorectal developmental cysts in adults. *Journal of the Korean Society of Coloproctology*, *27*(6), 303.
12. Krones, C. J., Peiper, C., Griefingholt, H., & Schumpelick, V. (2002). Tailgut cyst. Rare differential diagnosis of retrorectal tumors. *Der Chirurg; Zeitschrift fur Alle Gebiete der Operativen Medizen*, *73*(11), 1123-1126.
13. Uhlig, B. E., & Johnson, R. L. (1975). Presacral tumors and cysts in adults. *Diseases of the Colon & Rectum*, *18*(7), 581-596.
14. Whittaker, L. D., & Pemberton, J. D. (1938). Tumors ventral to the sacrum. *Annals of surgery*, *107*(1), 96.
15. Gucciardo, L., Uyttebroek, A., De Wever, I., Renard, M., Claus, F., Devlieger, R., ... & Deprest, J. (2011). Prenatal assessment and management of sacrococcygeal teratoma. *Prenatal diagnosis*, *31*(7), 678-688.
16. Pandya, K. A., & Radke, F. (2009). Benign skin lesions: lipomas, epidermal inclusion cysts, muscle and nerve biopsies. *Surgical Clinics*, *89*(3), 677-687.