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Atypical manifestation of giant epidermal cyst over sacrum coccygeal region in elderly male

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Abstract

Epidermal cysts are benign tumors commonly known as sebaceous cyst and frequently found throughout the body. These are lined with true, stratified-squamous epithelium, derived from hair follicle. They can grow of any size and maybe get infected frequently over a period of time. Epidermal is usually asymptomatic and mostly presents as a slowly growing painless mass. Epidermal cyst is most commonly confused with other cysts like dermoid cyst but histopathological examination provides the final diagnosis. We are reporting here an unusual presentation of large epidermal cyst in an old person over sacrum-coccygeal region which was successfully surgically excised. An epidermal cyst of this size is rarely reported over this region.

Keywords: Cyst epidermal, sacrum coccygeal, keratin, squamous epithelium, sacrum swelling, inclusion and sebaceous cyst, surgical excision

Introduction

Epidermal inclusion cysts are the most common cutaneous cysts. Though they can occur anywhere in the body but cysts in relation to sacrum coccygeal region is quite rare, particularly in elderly. Here we present a case of large sacrum coccygeal epidermal cyst in an elderly male [1]. Epidermal cysts are frequently occurring benign cysts all over the body and their presence in the sacrum coccygeal region is very rare. Cysts in these regions generally have embryological origins [2]. An epidermal inclusion cyst develops when epidermal cells migrate into the stratified squamous epithelium-lined dermis. These lesions are typically small, solitary and slow growing, located on the trunk, face, neck, with uncommon cases of larger masses reported on extremities [3-4]. 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 [5]. Epidermal 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 elderly [6].

Swellings around the sacral coccygeal are uncommon and an epidermal cyst in this region is considered a very rare differential diagnosis [7]. Epidermal cyst is a rare benign congenital lesion, characterized by the presence of a cyst lined with keratinized squamous epithelium. It probably originates from embryonic remnants following the development and disappearance of the neurenteric canal, proctodeal membrane or postanal gut [8].

Case Report

A 71-year-old male patient reported to outpatient department with complaint of large swelling over sacrum coccygeal region posterior to anal opening. Patient noticed swelling ten year ago, which was initially small in size, but gradually increased to current size of approx. 5 cm* 9 cm, 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 over sacrum coccygeal region and almost five 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. 5 cm* 9 cm, found to be soft, cystic, and mobile with no discharge coming out of swelling and no abnormality was detected on per rectal examination.

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. Findings showed well defined abnormal signal intensity lesion noted measuring approx. 50 x 90 mm bilobe cystic area in subcutaneous planes of sacrum coccygeal region in dorsal surface without any presacral component. However no obvious communication to central canal is noted. Lesion appears hypo intense on T1W1 and hyper intense on T2W1 with low signal intense areas. Lesion does not show communication with spinal cord and rectum. In addition to benign subcutaneous cystic lesion such as giant epidermal inclusion and sebaceous cyst the differential diagnosis also includes sacrum coccygeal teratoma. 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 general anesthesia after routine investigations which were essentially normal.

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.

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

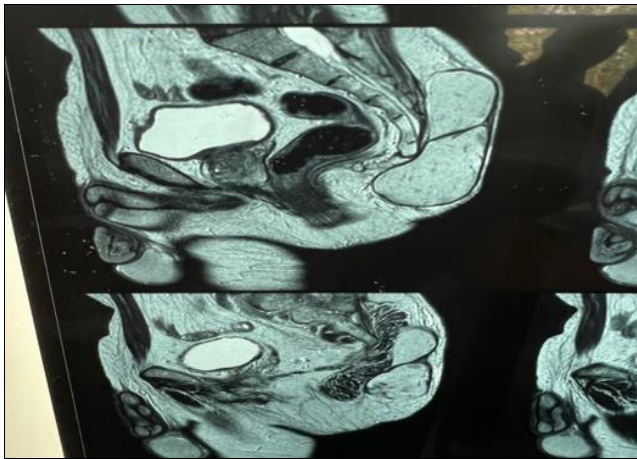


Fig 1: MRI picture of sacrum coccygeal region showing cystic lesion looking two lobes

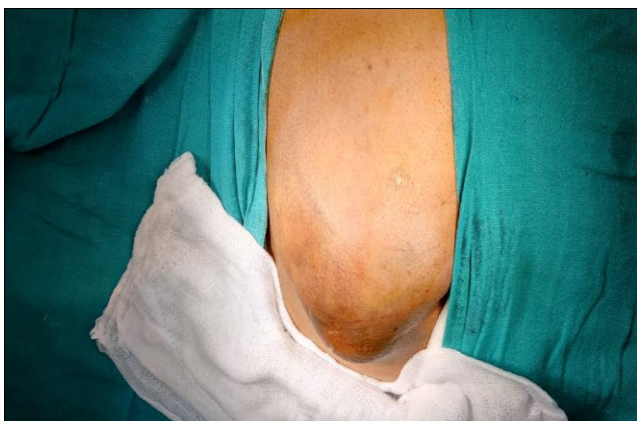


Fig 2: Pre op photo of cyst in lateral position



Fig 3: Epidermal CYST in view which was looking two lobes in MRI



Fig 4: Pultaceous material comes out after burst during resection of cyst

Discussion

Epidermal cysts are most common benign epithelial cysts and generally devoid of malignant potential^[9]. Large Sebaceous cyst over Sacrum is rare and may be confused with other diseases such as Meningocele, Meningomyelocele, Sacrum coccygeal tumor etc. They may also be infected and cause problems or may cause cosmetic stigma for the patient. They occur commonly in hair bearing areas mostly on scalp, scrotum, face and trunk. These cysts are lined by stratified squamous epithelium and contain loosely packed keratin debris and cholesterol and best treatment for these cyst are complete excision. Complications include infection, malignant transformation, and rupture causing a granulomatous reaction or even abscess formation and recurrence if not excised properly^[10]. 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^[11]. Uhlig and Johnson gave classification for retro rectal tumors and modified by Lovelady and Dockerty. According to this classification, retro rectal tumors are divided into 5 categories: congenital, inflammatory, neurogenic, osteogenic and others^[12]. 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 tumors were malignant. An epidermal cyst was not detected in any of the cases in the study^[13]. The precise diagnosis and appropriate treatment are very important for tumors 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%^[14]. In this case, due to the rare anatomical location of cyst it prompted us to do definitive diagnosis by completely excising it.

MRI is the most useful investigation for cystic swelling in sacrum coccygeal region. Literature confirms that epidermal cysts in the sacrum coccygeal region are very rarely seen. Our case was a 71 year old male patient with sacrum coccygeal epidermal cyst. As per our literature search, we found very few articles on sacrum coccygeal epidermal cysts in adults presenting with symptomatic swelling. The most common locations of epidermal cysts are the face, trunk and neck; however, some exceptional locations have been reported [15]. Retro rectal tumors are heterogeneous lesions confined to the space in front of the lower part of the sacrum and coccyx. That is why in the case of large cystic lesion en-bloc coccygectomy is done. However, in view of risk of malignancy and recurrence in sacrum coccygeal teratoma (SCT), the pre sacral or precoccygeal cysts are removed en block with coccyx in children [16-17]. But in our case cyst was present over sacrum coccygeal region which was removed completely.

Conclusion

Epidermal cyst is a common disorder seen in surgical outpatient departments. Sacrum coccygeal epidermal inclusion cysts are very rare particularly in elderly. Complete excision should be done after ruling out communication with rectum and spinal canal. In view of its rarity, we are reporting this case we encountered in our institute. Large Epidermal cyst over the sacrum is a rare presentation of epidermal cyst and even rarer is a cyst as large as the case discussed above. Gold Standard treatment after ruling out other causes is Surgical Excision. Complications can occur at any point and so it should be treated with outmost care.

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