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Case Report

Posterior surgical approach for excision of retrorectal epidermal inclusion cyst, a road less travelled by surgeon: case report

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ABSTRACT

Retrorectal epidermal inclusion cysts are rare congenital cystic lesions, mostly an incidental finding usually diagnosed in middle-aged women. Surgical resection is the main stay of treatment and 3 operative approaches are commonly used: abdominal, trans-sacral/coccygeal (posterior), and combined abdomino-posterior depending on the nature and location of the lesion. We report a case of a 22-year-old male presented with complaints of on-off constipation since 4 years, perineal heaviness since 2 years. Based on digital rectal exam, trans-rectal ultrasound, computed tomography, and magnetic resonance imaging findings, a presumptive diagnosis of retrorectal cyst was made. Patient underwent excision of cystic lesion by posterior trans-coccygeal approach. Post operative histopathology confirmed diagnosis of the retrorectal epidermal inclusion cyst. On follow-up after one month, symptoms of constipation and perineal heaviness completely resolved. Posterior resection allows proximal extension for elimination of the infection and in cases of adherence of the cyst to surrounding structures or in malignancy, which require en bloc resection. Posterior approach for resection is preferred for patients with posterior retrorectal cyst or presacral cyst because it provides adequate exposure with minimum dissection.

Keywords: Posterior approach, Trans-coccygeal approach, Retrorectal cyst, Epidermal inclusion cyst

INTRODUCTION

Retrorectal cyst is a rare congenital cystic lesion predominantly affecting women.[1] The majority of retrorectal cysts are benign and malignant transformation is seen in 2%–10% of cases.[2] The cysts are usually diagnosed by clinical assessment, computed tomography and magnetic resonance imaging (MRI).[3] Surgical excision approach depends on the location of the cyst. For posterior retrorectal cyst, trans-sacral/trans-coccygeal resection, an minimally invasive surgery is the best option.[4,5] The case report of posterior approach in Indian setting is very limited, therefore, we present a case with trans-coccygeal approach to a retrorectal cyst as a feasible option in terms of safety, learning and minimal invasiveness

CASE REPORT

A 22 year-old man no known morbidities presented to our tertiary care centre Lady Hardinge Medical College and associated Smt Sucheta Kriplani Hospital, Delhi, India with chief complaints of on-off constipation since 4 years and perineal heaviness since 2 years. On examination, patient was conscious and vitally stable. On digital rectal examination a swelling of size 4×4 cms palpable 3 cms above from anal verge, located posteriorly (4-8 o'clock), non-tender, immobile, firm in consistency, ill defined margins, smooth surface with free overlying rectal mucosa with no blood staining on finger.

Routine laboratory tests including complete blood count, liver and renal function tests, coagulation profile, serum

tumor markers- carcinoembryonic antigen (CEA) and alpha-fetoprotein (AFP) were also within the normal range.

On radiological investigation computed tomography (CT) of the abdomen (Figure 1) revealed a well defined capsulated lesion (3×2.5×3 cm) seen in midline towards left, posterior to lower third rectum and anterior to lowermost part of sacrum and coccyx with fat planes adjacent to soft tissue maintained with impression- well defined cystic lesion in retrorectal space likely - epidermoid cyst. Trans-rectal ultrasound (TRUS) (Figure 2) reveals a thick walled hyperechoic cystic lesion 3x3 cm with multiple internal echoes in lower third retrorectal area seen in left paramedian position no internal vascularity s/o- collection/complex cyst. MRI pelvis (Figure 3) shows a well-defined homogeneous T2 STIR hyper intense signal intensity structure at the lower pelvis retrorectal in location, approaching the level of the anal canal likely cystic nature. Anterior displacement of the rectum was seen with no signs of rectal wall signal alteration to suggest infiltration with abutment of the inferior margin of the coccyx was seen with no spinal extension or bone destruction.

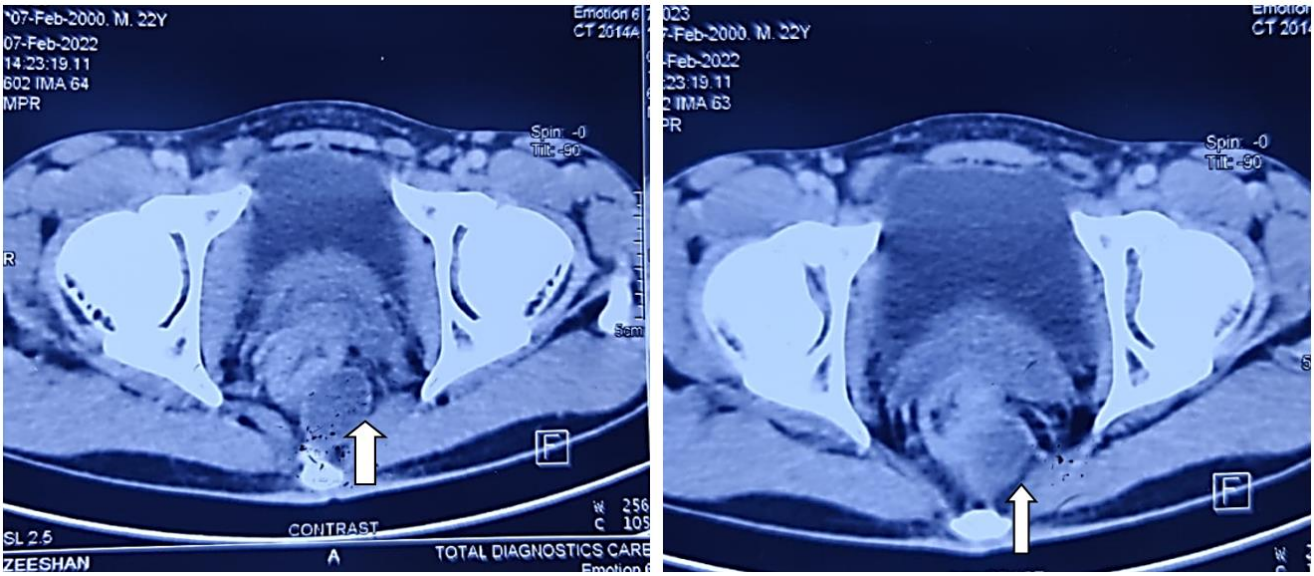

Figure 1: CECT shows a well defined capsulated lesion (3×2.5×3 cm) seen in midline towards left, posterior to lower third rectum and anterior to lowermost part of sacrum and coccyx.

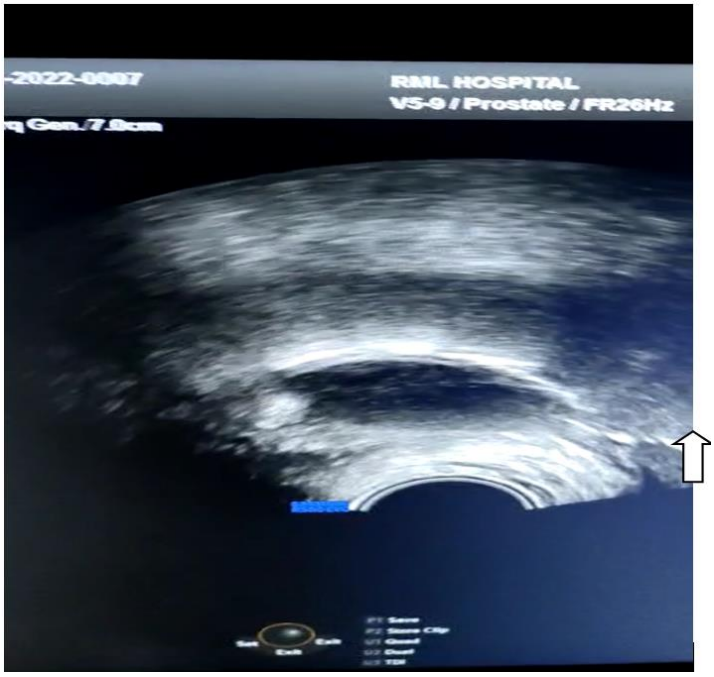

Figure 2: A thick walled hyperechoic cystic lesion 3×3 cm with multiple internal echoes in lower third retrorectal area seen in left paramedian position no internal vascularity.

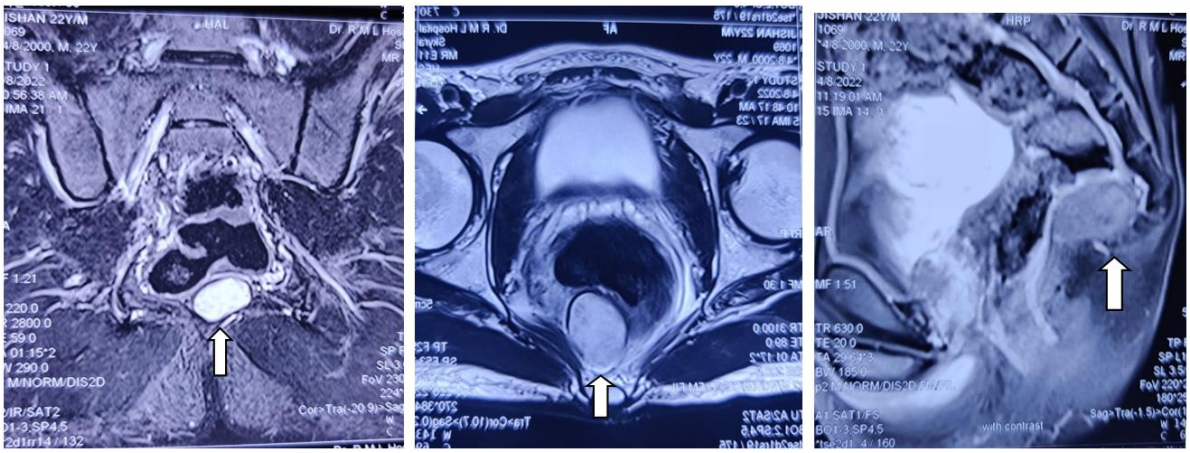

Figure 3: MRI pelvis shows a well defined round to oval lesion noted in the presacral space.

Figure 4: Position of patient-prone with flexion at hip joint and leg apart.

Figure 5: Intra-operative showing trans-sacral approach with Index finger (double gloves) of left hand inserted into the anal canal and lower rectum, pushing the lesion upwards to facilitate dissection.

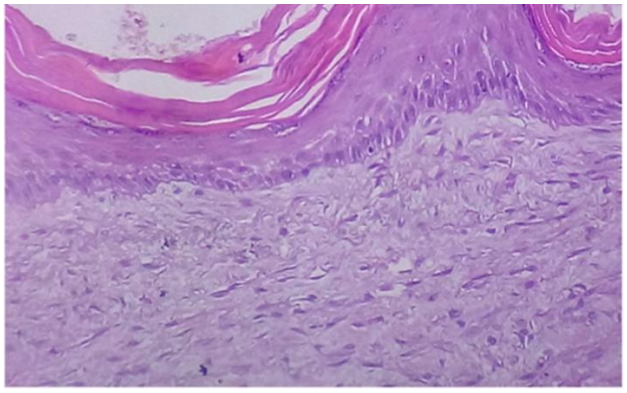

Figure 6: Histological examination revealed a multilocular cystic structure with cyst wall lined by non-keratinized stratified squamous epithelium.

Under general anesthesia, the patient was placed in prone position with flexion at hip joint and both legs apart (Figure 4) and incision made over the lower portion of the sacrum and coccyx down to the anus taking care to avoid damage to the external sphincter. Lower coccyx excised to facilitate the dissection. Index finger (double gloves) of left hand inserted into the anal canal and lower rectum, pushing the lesion upwards to facilitate dissection of the lesion off the wall of the rectum without any injury (Figure 5). A cystic lesion measuring 4×3 cm densely adhere to coccyx located posterior to the rectum was completely excised along with a part of coccyx bone and wound was closed. Histological examination (Figure 6) revealed a multilocular cystic structure with cyst wall lined by non–keratinized stratified squamous epithelium. Patient was subsequently orally allowed and mobilized and discharged on post op day 2 and was followed up in OPD with complete resolution of symptom of constipation and perineal heaviness in one month.

DISCUSSION

Retrorectal cysts are rare, affect middle-aged women, usually asymptomatic however, symptoms caused by the local effects of the cyst, constipation, rectal fullness,

lower abdominal pain with a retrorectal mass palpable on digital rectal examination are present.[6] Retrorectal cysts are classified as epidermoid cysts, dermoid cysts, enteric cysts (tailgut cysts and cystic rectal duplication), and plications.[7] Complete surgical resection is the treatment of choice with risk such as recurrence, local symptoms, and malignancy.[8] Different approaches are described in the literature- abdominal, posterior (trans-sacral/trans-coccygeal) and combined abdomino-posteror depending on the nature and location of the lesion (Figure 7). Posterior surgical excision through the trans-sacral/coccygeal incision is the preferred treatment for the posterior tailgut cyst.[4] Posterior trans-sacral/ trans-coccygeal approach is also suitable for small, benign tumors with nerve involvement, as this approach improved visualization of nerves and is ideal for retrorectal tumors that do not extend above the level of sacral nerve.[9-11]

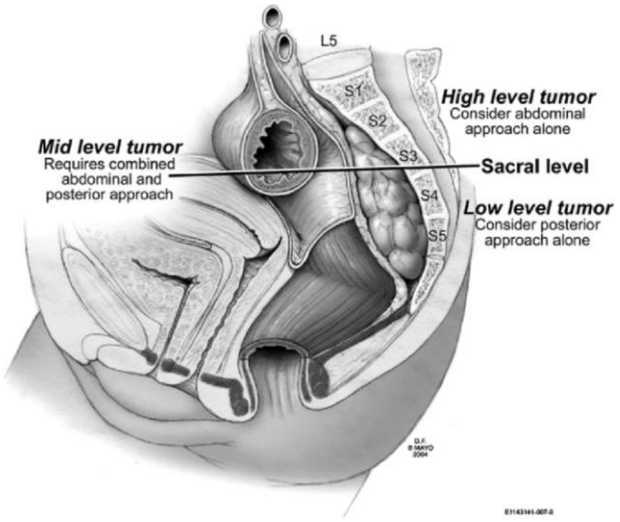

Figure 7: Different approach for resection of retrorectal tumor.

CONCLUSION

Posterior trans-coccygeal excision approach for low level tumor is an open, minimally invasive technique with wide exposure and safe to perform procedure with early postoperative recovery. This approach allows proximal extension for elimination of the infection and in cases of adherence of the cyst to surrounding structures or in malignancy, also allows en-bloc resection.

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