Case Report

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Retro-rectal mass: a clinical dilemma; report of three cases with brief review of literature

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ABSTRACT

Retro rectal or presacral tumors are uncommon lesions. It can be difficult to diagnose as presenting signs and symptoms are usually nonspecific. Retro rectal lesions can be congenital or acquired, benign or malignant. Children can also have retro rectal masses like anterior meningocele, teratomas or cystic teratomas. FNAC or biopsy usually is not required as imaging can provide a reasonably good diagnosis. Cross-sectional imaging is essential in evaluating these lesions to determine the optimal surgical approach and the extent of resection. Surgery is the mainstay of treatment as it establishes the diagnosis and prevents the adverse consequences associated with malignant degeneration and secondary bacterial infection. The outcomes for patients with benign presacral tumors are favourable.

Keywords: Chordoma, Dermoid cyst, Duplication cyst, Retro rectal space

INTRODUCTION

Retro rectal tumours are uncommon lesions and are seen in adults and the children as well, diagnosis is often difficult and challenging. The incidence of retro rectal masses is found variable in literature, from 2,1-6,3 cases a year to 1 in 40,000 hospital admissions in a large series from Mayo clinic.^{1,2} Spencer and Jackman found precoccygeal cysts in 30 out of 20851 proctological examinations (0.014%) performed in a single year.³ Retro rectal tumours can be congenital or acquired. Congenital lesions are the most common accounting for 55-65%, neurogenic (10-12%), inflammatory 5%, osseous 5-11%, and miscellaneous 12.16%.^{1,2} Surgery is the main stay of treatment. First successful resection for a presacral tumour was performed in 1945 by Bowers at Waker Reed army medical center.⁴ Prognosis is usually good in benign

cases after a successful complete surgical resection. Three cases of retro rectal masses managed recently are discussed here.

CASE REPORT

Case 1

A 72 years old female presented with a painless swelling in sacral area of long duration. No other associated symptoms. Past history of excision of a mass in same area 18 years ago (with recurrence); no details available. On examination, a soft fluctuant/cystic mass of size ~5x4 cm was seen in posterior/coccygeal perineum, partially reducible and non-tender. On per rectal examination, cystic mass felt through posterior rectal wall and on bimanual examination, cross fluctuation was felt. Rectal

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wall was free from mass. Patient was investigated thoroughly including MRI of pelvis and abdomen. All biochemical and hematological investigations were normal. On trans-abdominal USG screening, the lesion had coarse homogeneous internal echoes. Plain X-ray of abdomen and pelvis showed a soft tissue mass in pelvis with no calcification. CE-MRI revealed a well-

circumscribed ovoid cystic lesion in the posterior meso rectal/ retro rectal space having thin regular walls, an incomplete internal septum/cord and homogenous fluid contents (Figure 1a, 1b, 2a and 2b). A diagnosis of benign developmental cyst (duplication cyst/ epidermoid cyst) was made.

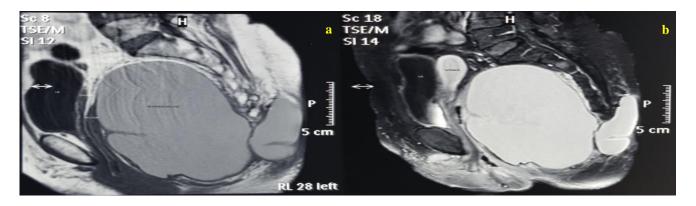


Figure 1: 1a (T1W) and 1b (Post-gadolinium T1W) sagittal images showing thin-walled retro rectal cyst having T1-hyperintense contents with another similar posterior cyst locule protruding into coccygeal part of the natal cleft (palpable part).

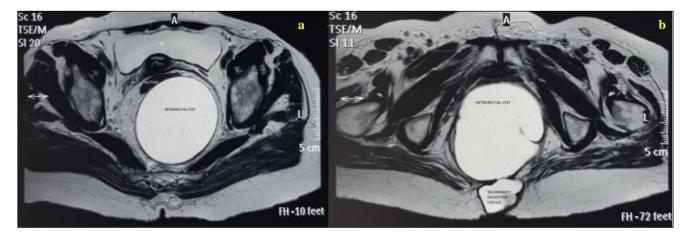


Figure 2 (a and b): T2W axial images through upper and lower parts of retro rectal cyst with a secondary locule protruding across the anococcygeal ligament into subcutaneous area of the natal cleft.

Patient was operated by sacro-coccygeal route after excising the coccyx. Cyst wall could be easily separated all around except at its base where it was adhering to rectal wall. This adherent part of cyst wall was left over, and rest of wall was excised. Wound was closed in layers. Histology of the lesion was rectal duplication cyst (smooth muscle outside the epithelial lining).

Case 2

A 54 years old male was admitted with difficulty in passing urine and stools for 7 days. He had to go for urination every half an hour. No significant past history.

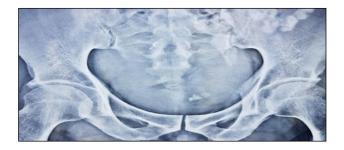


Figure 3: Pelvic X-ray shows a soft tissue mass in vesical/ rectal area with two tooth-like calcifications and adjacent small lucency/ fatty tissue.

On physical examination, there were no positive findings. Abdominal examination was within normal limits except a palpable bladder. On per rectal examination a firm mass was felt posterior to rectal wall and rectal wall was freely mobile over it. Anteriorly, prostate could be felt separately. Rectum as such was normal.

Biochemical and haematological investigations were normal. USG abdomen revealed a soft tissue mass posterior to rectum with particulate debris and calcification. Plain X-ray of abdomen and pelvis (Figure 3) showed soft tissue density mass in lower mid pelvis

with two tooth-like calcifications and adjacent small lucency/fatty tissue.

CECT revealed a well-circumscribed cystic tubular mass with thin imperceptible walls and homogenous fluid contents (which were slightly hyperdense to urine) in the posterior meso rectal/ retro rectal space. There was a small smooth incomplete septum/indentation at left aspect with adjacent eccentric extramural foci of fat as well as focal dense calcification (Figure 4a, 4b and 4c). A diagnosis of benign developmental cyst (dermoid cyst) was made on CECT.



Figure 4: CECT axial (4a and 4b) and sagittal (4c) images show a well-circumscribed cystic tubular mass with thin imperceptible walls and homogenous fluid contents (which were slightly hyperdense to urine) in the posterior meso rectal/ retro rectal space pushing/indenting the rectum in left anterior aspect. There was a small smooth incomplete septum/indentation at left posterolateral aspect with adjacent eccentric extramural foci of fat as well as focal dense calcification/ teeth.

With a diagnosis of retro-rectal dermoid cyst, it was decided to approach through sacrococcygeal route. Patient was put in Jack-knife position with buttocks apart. After excising coccyx, retro-rectal space was entered, and cyst was identified easily. It was separated from surroundings easily and could be excised in toto. Rectal wall was intact. Incision was closed in layers around a drain tube. Post-operative recovery was normal.

Histopathological report was epidermoid cyst lined by stratified squamous epithelium.

Case 3

A 71 years old female presented with pain at anal verge following a fall few weeks ago. No history of bleeding per rectum or constipation. No past history of significant illness. On examination, she appeared healthy with no anaemia or jaundice. Abdominal examination was normal. On PR examination, anal verge was normal except a few skin tags. Local tenderness felt at coccygeal area. On PR examination, a loose portion of coccyx felt and passive movements of that produced the same pain which she was complaining. Rest of examination was normal.

On investigation, X-ray of pelvis showed doubtful fracture of lower end of coccyx. Patient was managed conservatively and improved. She was seen in follow up after about three months with same pain and of severe intensity. This time on PR examination, a hard-fixed mass was felt posterior to rectum and subsequent MRI suggested it to be a chordoma. Probably initially it was missed, or it presented earlier with pain and could not be diagnosed. Patient refused for any further treatment and left.

DISCUSSION

Primary tumors in retro rectal or presacral space are very rare and constitute 1 in 40,000 hospital admissions in a large series from the Mayo clinic.² Retro rectal masses are usually congenital developmental cysts including dermoid cyst, epidermoid cyst, enteric duplication cyst and neuro enteric cysts.² Tail gut cysts are also included in such masses, also called as retro rectal cystic hemartomas.⁵ The majority of retro rectal masses are benign and differential diagnosis include cystic teratoma, epidermal cyst, neuroblastoma, pyogenic abscess, adnexal mass and rarely necrotic rectal leiomyosarcoma.⁶ Presacral tumors are classified as inflammatory,

congenital, neurogenic, osseous and miscellaneous. It can also be classified as congenital or required.⁷

Acquired lesions include carcinoid tumors, endometroid carcinoma, adeno squamous carcinoma and sarcoma which are rare malignant changes in tail gut cysts.⁸

Diagnosis is usually made on physical and rectal examination, added by proctoscopy. 9,10

Traditionally plain X ray showing radio opaque shadow, ultrasonography of lower abdomen and pelvis, CECT and Contrast enhanced MRI should establish the diagnosis. Transrectal ultrasonography appears to have a utility in establishing the diagnosis.

Since malignant masses are rare and can be suspected clinically, role of FNAC or biopsy is minimal for the fear of introducing infection and spillage of tumour cells. Diagnosis is usually clear and confirmed on CECT, CE MRI or trans rectal sonography. TRUS can exclude the malignant mass easily.

Surgery is the main stay as it offers the best outcome and prevents further complications. Surgical approach depends upon location of mass and expertise available. Various routes available are, laparotomy alone or in combination with perineal approach, trans Sacro coccygeal, perineal, laparoscopic route. Trans anal endoscopic microsurgery and laparoscopic approach have yielded good results in some reports in literature. Posterior approach in inter-sphincteric or Para sacrococcygeal plane has also been reported with good continence.

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