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TAILGUT CYST: A RARE CASE REPORT

General Surgery

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ABSTRACT

Objective: Tailgut cysts are rare retro rectal masses often presenting with non-specific symptoms which are challenging to diagnose and manage. **Methods:** A 40 year old female presented with abdominal distention and urinary retention on further evaluation diagnosis of tail gut cyst has been made with retro rectal tumors as differential diagnosis and was operated through trans-abdominal cyst excision. On histo-pathological examination diagnosis was confirmed. **Conclusions:** Retro-rectal lesions in female patients can mimic gynecological pathology. Patients with this rare pathology are to be treated in a major tertiary hospital by surgeons, who are able to operate safely in the retro-rectal space.

KEYWORDS

retro-rectal tumor, rare case, females, laparotomy.

INTRODUCTION

The pre-sacral space, also known as retro rectal space. Presacral masses can be congenital, inflammatory, embryological remnants, neurogenic, or osseous in nature. They are rare but can be challenging to manage. The tailgut cyst, being one of the rare congenital malformations which may present in the pre sacral space, is a remnant of the postnatal part of the hindgut. As the embryo starts to fold inward during the 4th week of gestation to enclose the future gut, the cloacal membrane (made up from the endoderm below the level of Hensen's node) comes to lie ventral and encloses the caudal portion distal to the eventual hindgut and is called a tailgut. The tailgut normally regresses by the 6th week of gestation. If the mucous- secreting remnants fail to regress, a tailgut cyst is formed. Tailgut cysts can present at any age, although they usually appear between the ages of 30 and 60. There is a strong predominance in females – the female to male ratio is 5:1. The majority of cysts are asymptomatic, and often missed on digital rectal exam due to low tension of the cyst[1].

Anatomy

Presacral or retro-rectal space is not a true space but rather a potential space .It is a rather unique area as it represents a developmentally critical location where several types of embryological distinct cell lines converge for final steps prior to completion of ontogeny Superior extent – pelvic peritoneal reflections, Lateral limits – ureters and iliac vessels, Posteriorly – sacrum, Anteriorly – posterior wall of the rectum, Inferiorly – levator complex and the coccygeal muscles

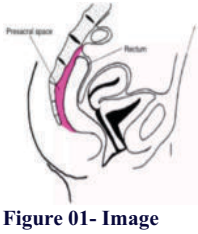

Figure 01- Image showing Pre-sacral space.

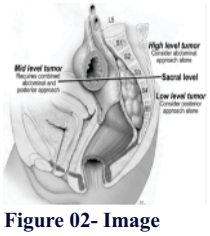

Figure 02- Image showing the level of the tumor.

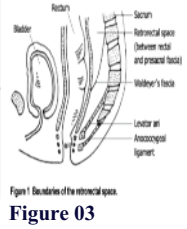

Figure 03 Boundaries of retrorectal space.

Case Report :

A 40 year old female patient has come to the emergency center with c/o retention of urine since 1 day History of constipation since 3 days, similar recurrent complaints since 7 years. On General examination, Patient was well built & nourished, Conscious and coherent cooperative .On physical examination ,Per abdomen was distended , non-tender , bladder palpable upto xiphisternum and no organomegaly. Per vaginal examination was Normal , digital rectal examination anal sphincter tone was normal , normal flexibility of perianal soft tissue and an empty rectal vault with an extra rectal fullness posteriorly that is reachable with fingertip.On further evaluation of the patient ultrasound abdomen was found to retroperitoneal collection around 400 cc, contrast enhanced computerised tomography was done , which gave an impression of an extra peritoneal left pelvic space occupying ,well circumscribed,rounded pre sacral mass at the level of S4 measuring approximately of 8cms was observed. Magnetic resonance imaging has revealed a low signal intensity on T1 weighted imaging and High signal intensity on T2 weighted images .

Final diagnosis of tail gut cyst has been made with retrorectal tumors as differential diagnosis and planned for trans abdominal cyst excision under general anesthesia. intra operatively A well capsulated pre-sacral cyst was noted. Complete cyst resection was done in avascular plane . On histo pathological examination, it was revealed as a tailgut cyst. post operatively the patient was stable Tailgut cyst lining can exhibit different types of epithelium including columnar, transitional and squamous.

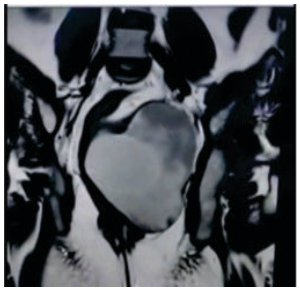

Figure 03 – Axial MRI view of the tumor.

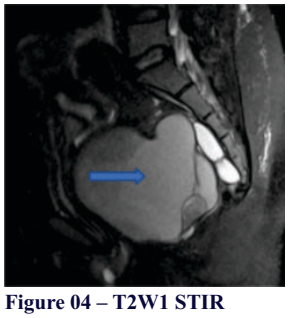

Figure 04 – T2W1 STIR showing tumor.

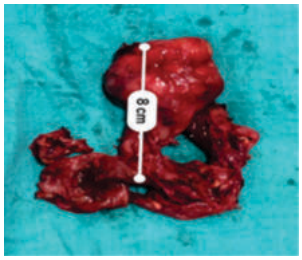

Figure 05- Gross image of the tailgut cyst.

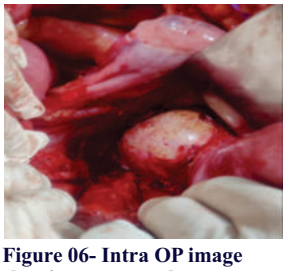

Figure 06- Intra OP image showing pre-sacral space containing the cyst.

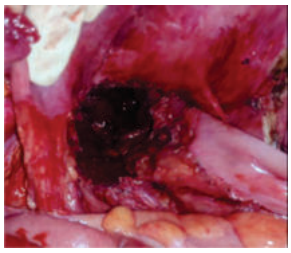

Figure 07- Pre-sacral space after removal of the cyst.

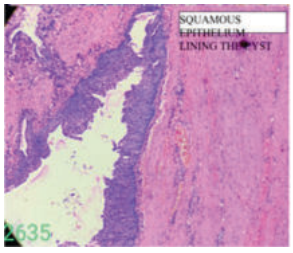

Figure 08- Histopathlogical image showing the lining epithelium.

DISCUSSION

Their presentation and the subsequent clinical picture can range from an asymptomatic incidental finding on imaging to a prolapsing cyst through the anus; this has been reported in the literature to have been misdiagnosed as hemorrhoids[4,5]. Compression of the nearby organs can cause an array of symptoms, including urological, neurological, and defecation difficulties. Other acute presentations, such as acute urinary retention and obstipation, have been reported with large tailgut cysts[6]. Among reported uncommon presentations is right sciatica[7]. The diagnosis can take place as early as a finding on prenatal-screening ultrasonography or as late as a finding in autopsy[9].

Surgery

Excision of a retrorectal tumor is advised not only as a treatment option for symptomatic patients but also for asymptomatic patients, as those silent masses carry a considerable risk for presenting with serious illnesses when left untreated. Surgical excision is also advised to rule out the possibility of malignancy or future malignant transformation, infection, defecation difficulties, or potential dystocia in pregnant females. Complete excision for benign lesions promises a life-long disease- free expectancy, and in case of recurrence, the local excision can be safely carried out[15]. A vast range of approaches is described in the literature, varying between transabdominal in means of laparotomy or laparoscopy, trans-sacral, inter sphincteric , trans-sphincteric .parasacrococcygeal, or transanal – whether with endoscopic microsurgery or without. A transabdominal approach assures visualization of the important structures and thus a better oncological resection for cases with suspected malignancy. While the laparoscopic approaches offer the same benefits with the advantage of being less invasive, the requirement of additional equipment incurs higher costs. For small, low-lying, non-infected cases, transanal or trans rectal approaches can be used, although these result in a theoretically higher risk of pelvic infection as the rectum is used as a portal of entry. Since primary retrorectal tumors are very rare, the successful treatment of these tumors is dependent on extensive knowledge of pelvic anatomy, and expertise in pelvic surgery is mandatory to avoid serious injuries in an anatomically crowded presacral area. Choosing the posterior approach for low-lying benign lesions (below S3) that do not involve the rectum offers relatively easy access to the presacral area and avoids entering the peritoneal cavity through the abdomen.

Paul Kraske originally described this approach on 10th December 1884 during the 14th Congress of German Surgeons: it allows exposure of the mid rectum after removal of the coccyx and a portion of the left sacral wing. It is advised to avoid this approach for high-lying tumors (above S3), as lack of access to the pelvic vessels in cases of intraoperative bleeding . As a rule of thumb, if the upper extent of the lesion can be palpated on rectal examination, it is likely to be resectable trans-sacrally.

CONCLUSION

A consideration that applies in all fields of surgery remains valid in this case as well: the preferred surgical approach is the one in which the surgeon has the most experience.

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