

Tailgut cyst: 2 cases report

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Key Clinical Message :

Tailgut cysts, or retrorectal cystic hamartomas, are rare congenital developmental lesions. It is a benign lesion but risks to degenerate so the necessity of surgical resection.

Key Words: Retrorectal mass · Tailgut cyst · Surgical resection · transabdominal approach

1. Introduction

Tailgut cysts, or retrorectal cystic hamartomas, are rare congenital developmental lesions that are thought to be derived from remnants of the embryonic postanal gut with incomplete regression during development. They are most commonly located in the retrorectal space and are more common in women. In fact, 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[1]. The tailgut normally regresses by the 6th week of gestation. If the mucous-secreting remnants fail to regress, a tailgut cyst is formed.

We present two cases of retrorectal tailgut cyst managed using a transabdominal approach.

2. Cases report

Case 1:

We present the case of a 53-year-old female presented with incidentally detected retrorectal mass during stadification of acute pancreatitis. The CT scan showed a left-lying, well-circumscribed, rounded presacral mass at the level of the 4th sacral vertebra, measuring 5 × 3.4 (figure 1: red arrow) , with a central liquid component, a peripheral tissue density of 36HE, and a fine calcification at the right rim. No signs of osseous destruction were noted.

Figure 1: Axial sections of the abdominopelvic CT scan showing the tailgut cyst with wall calcification

The physical examination showed an anal sphincter with normal tone, normal flexibility of the perianal soft tissue, and an empty rectal vault with an extrarectal fullness posteriorly that is reachable with the fingertip.

The patient was operated after restitution ad integrum of acute pancreatitis. She had a laparoscopic cholecystectomy with CPO and complete resection through an avascular plane of the rerorectal mass of 5 cm long by an under umbilical midline incision.

The surgical specimen was sent for pathological examination that revealed a tailgut cyst without sign of malignancy (figure2).

Figure 2: pathological examination of spicemen

Case 2 :

A 68 year-old female presented with pelvic pain which appeared 3 months ago.

Abdominal examination was normal. The rectal examination revealed a bulge of the posterior wall.

MRI showed a retrorectal polylobed oval mass measuring 4 cm (figure 3). The biopsy was not done because of the risk of dissemination and bleeding.

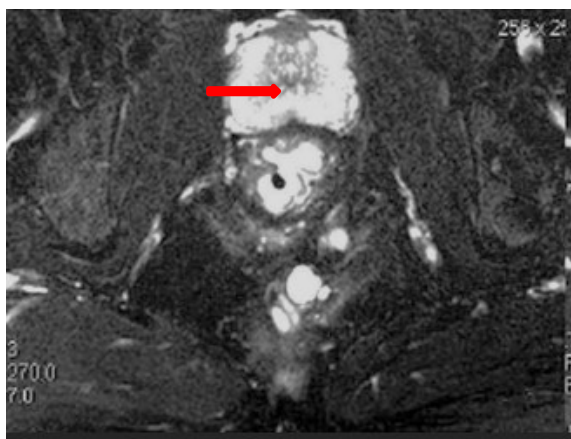


Figure 3 : retrorectal polylobed oval mass

The patient was operated. She had a complete resection of the mass through a midline incision.

Pathological examination of the specimen showed a tailgut cyst without malignancy (figure 4).

Figure 4 : Surgical specimen

3. Discussion

Retrorectal tailgut cysts, also known as retrorectal cystic hamartomas, are rare congenital lesions, located in the retrorectal space, which is bounded anteriorly by the rectum, posteriorly by the sacrum, superiorly by the peritoneal reflection, inferiorly by the levator ani and coccygeus muscles, and laterally by the ureters and iliac vessels (figure 5).

1: sacrum 2: retrorectal space 3: Waldayer's fascia 4: levator ani 5: anococcygeal ligament

Figure 5 : the retrorectal space

Tailgut cyst is most prevalent in middle-aged women, arising from postnatal primitive gut remnants, but can be found in a wide range of age groups including infancy. Most tailgut cysts are asymptomatic, and they often are discovered incidentally or presented as a compressive effect of a growing mass within the pelvis such as change in stool caliber, a palpable rectal mass, urinary frequency, and frequently as infected tailgut cyst with rectal fistula or anal fistula [2,3]

The diagnosis can take place as early as a finding on prenatal-screening ultrasonography or as late as a finding in autopsy.

Tailgut cyst lining can exhibit different types of epithelium including columnar, transitional and squamous. The presence of some glandular or transitional epithelium differentiates them from epidermoid and dermoid cysts, which can communicate with the skin.

3.1. Diagnosis

CT showed a retrorectal mass and transrectal ultrasound and rectal MRI are good diagnostic tools. On CT a tailgut cyst is a presacral mass with a central liquid component, a high peripheral tissue density, and a fine calcification at the rim.

On MRI a tailgut cyst typically demonstrates low signal intensity on T1-weighted images and high signal intensity on T2-weighted images, though it may vary according to the content[4].

Surgical excision followed by a complete histological examination is the recommended path of treatment, instead of a preoperative biopsy.

3.2. Surgery

Complete surgical resection is the traditional treatment of choice, eliminating the potential of recurrence, hemorrhage, infection, compression, and malignant transformation.

The most common surgical approach described for tailgut cyst excision is via a posterior parasacral incision, with the goal of complete removal of the cyst [3,5–7]. In the present series, the decision whether use an anterior-only, posterior-only or combined approach was determined by the degree of proximal extension of the cyst (if higher than the third sacral body, a combined anterior-posterior or anterior-only approach was used), whether or not the cyst had been infected and was adherent to surrounding structures (bladder, ureters, rectum), and whether lesions were malignant and required en bloc organ resection. The results confirm that most benign cysts can be removed successfully using a posterior approach and that these patients have improved recovery, with fewer complications, than those undergoing an anterior or combined approach.

Preoperative evaluation of presacral cysts at this institution currently involves CT of the pelvis, which provides important information to guide surgical planning, such as the overall size and upper pelvic extent of the cyst, whether or not it is inflamed, infected or adherent to surrounding structures, and whether or not malignant features are present[8,9] .

Recently, a laparoscopic approach for tailgut cyst removal has been introduced; this approach is particularly useful for low-lying cysts [7,10]. The main advantage of this approach is the magnifying effect it provides in a narrow pelvis. In selected cases involving small and radiologically uncomplicated lesions, the laparoscopic approach is a feasible option for experienced surgeons.

The issue of whether to carry out a coccygectomy in the setting of benign congenital presacral cysts is controversial. Several authors advocate coccygectomy, stating that this approach improves surgical exposure and decreases the risk of recurrence as the coccyx may harbour a nidus of totipotent cellular remnants that may later evolve into a recurrent cyst. The concern that retention of the coccyx will increase the risk of recurrence is not supported by published data, and some authors believe, if the cyst is not adherent to the coccyx and can be removed entirely without coccygectomy, that the coccyx should be left in place [8,11–13]. It is probable that the cyst itself, and not the coccyx, harbours the aberrant remnants of the postanal gut leading to formation of the cyst, and so coccygectomy carries no advantage if the cyst is not adherent to the coccyx. This perspective was adopted in the present series, with most surgeons electing to preserve the coccyx unless en bloc resection was required for malignancy or the cyst was densely adherent to the coccyx.

3.3. Cases of tailgut cyst reported in the literature

Table 1 : cases of tailgut cyst reported in the literature

4. Conclusion

Tailgut cysts are derivatives of the embryonic post-anal gut. Usually asymptomatic, they are discovered in adult life as an incidental retrorectal mass. Complications include infection, with the formation of retrorectal abscesses and occasionally anal fistulae, and a long-term risk of malignant change, which means that once discovered surgical excision is advised via an anterior or/and posterior approach.

5. Conflicts of interest

None declared

6. Acknowledgments

Published with the consent of the patients.

7. Authors' contrubution

Z Hadrich conceived the idea for the document and contributed to the writing and editing of the manuscript. N Kardoun contributed to the writing and editing of the manuscript. A Akrouit reviewed and edited the manuscript. H Harbi reviewed and edited the manuscript. S Boujelben contributed to the literature review, manuscript writing, editing, and review of the manuscript. All authors read and approved the final manuscript.

Ethic Statement : personal data have been respected

Funding none

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Figures :

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Tables :

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