

# Tailgut cysts: a rare cause of pelvic outlet obstruction

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## Summary

Tailgut cysts are unusual cystic tumors of the retrorectal space. We describe the findings of three cases. Constipation, intrapelvic fullness and low abdominal pain were the most prominent clinical manifestations. One patient developed an abscess. Ultrasound, computed tomography and MR imaging demonstrated the presacral lesions. Transabdominal excision of the tumors in two patients resulted in good outcome whereas in the patient with the abscess there was recurrence with a fistula formation.

*Key words:* Tailgut cyst; Retrorectal cystic hamartoma.

## Introduction

Cystic lesions of the retrorectal space are extremely rare, frequently unrecognized, misdiagnosed and mistreated [1]. Duplications of the rectum, teratomas, dermoids, epidermal cysts and retrorectal cystic hamartomas or tailgut cysts represent the commonest occupants of the retrorectal-presacrococcygal region [1, 2, 3].

Among them, tailgut cysts are infrequently encountered and appear to represent remnants from vestiges of the tailgut with characteristic microscopic features [2].

The aim of this paper is to present our experience with three female patients treated for tailgut cysts (TGCS) in order to help earlier recognition and appropriate treatment of these unusual lesions.

## Material and Methods

Our material includes three cases treated for tailgut cysts over the last ten years in two tertiary care hospitals. The clinical characteristics, imaging features, treatment and outcome are illustrated in Table 1 (Figures 1-3).

## Results

In two patients the cystic lesions were presented as painless presacral masses and in one as an intrapelvic abscess (Table 1). Ultrasonography (U/S), computed tomography (CT) and magnetic resonance imaging (MRI) identified the nature of the lesions in two patients (Figures 1-3). The nature of the abscess was confirmed by histology studies of the resected cystic wall.

Complete transabdominal resection was accomplished in two patients and no recurrence was found in follow-up. The third patient underwent partial cystic resection and drainage through the abdomen. Abscess recurrence occurred two months later and the patient underwent perineal drainage of the abscess. Since then a fistula developed. The patient refused further treatment.

## Discussion

The tailgut is the most caudal part of the embryonic hindgut. It regresses and disappears completely in most people. TGCs are derived from remnants of the tailgut [1, 2]. TGCs predominate in middle-aged women (female:male = 3:1) [2]. When symptomatic, the patients present intrapelvic fullness and low abdominal or rectal pain. Inflammation is a common finding. Abscesses and fistula formations are other complications as observed in patient 2 of our series. On rectal examination TGCs are palpable, mobile or fixed cystic fluctuant masses. A postanal funnel-shaped dimple indicates a TGC [3]. Occasionally, vaginal delivery may be difficult due to a TGC.

TGCs are multicystic lesions lined by columnar, cuboidal, squamous or transitional epithelium. They lack an organized muscular wall but they may have scattered bundles of smooth muscle [2, 4]. TGCs must be differentiated from other cystic lesions in the retrorectal space, like teratomas, dermoids, duplications of the rectum and epidermal cysts. The elements of teratomas derive from all three germ layers whereas dermal appendages are present in dermoids [1]. Rectal duplication cysts possess a well-developed muscular wall with a myoenteric plexus; these elements should be absent in TGCs [5].

Newer imaging techniques are helpful in the diagnosis of TGCs. On US they appear as complex cysts with internal echoes [6]. CT and MRI demonstrate a well-defined retrorectal mass with variable density or intensity, respectively, which depend on the contents of the cyst (water or keratinous or inflammatory material) [6, 7].

Malignant transformation in TGCs is a rare complication. Development of adenocarcinomas, carcinoids and sarcoma have been reported [2, 7, 8]. The clinical significance of TGCs is underlined by the morbidity that can result if the lesion remains unsuspected and no definite surgery is undertaken. Incisional biopsy is not recommended. It is extremely important to achieve an accurate preoperative diagnosis in order to avoid unnecessary surgical procedures and to perform the correct operation via a proper operative approach [2, 3].

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Table 1. — Manifestations, diagnosis, treatment and outcome of patients

Case	Age/Sex	Clinical findings	Imaging findings	Treatment	Outcome
1	52/F	Constipation, intrapelvic fullness, vague lower abdominal pain. Palpable mass 6x6 cm above the dentate line on digital examination.	Retrorectal cystic mass	Transabdominal complete excision	Good
2	33/F	Fever, low abdominal pain, tenderness. Painful hard mass on digital examination.	Multicular retro-rectal abscess	Transabdominal partial excision, drainage of abscess cavity	Abscess recurrence, perineal fistula formation
3	29/F	Constipation, intrapelvic fullness. Palpable mass 4x4 cm above the dentate line on digital examination.	Retrorectal unilocular cystic mass	Transabdominal complete excision	Good

Total excision is the treatment of choice even in asymptomatic patients due to malignant transformation and abscess formation. A trans-abdominal approach with complete excision was attained in two of our cases. This method is recommended for multilocular lesions less than 5 cm. Transanal resection should be adopted for small and low-positioned lesions, however there is a risk of leaving other cysts behind because of limited visualization [3]. TGCs are frequently multilocular, the posterior pararectal approach offers the best chance of identifying and completely removing the lesion in most patients [2, 4]. We are con-

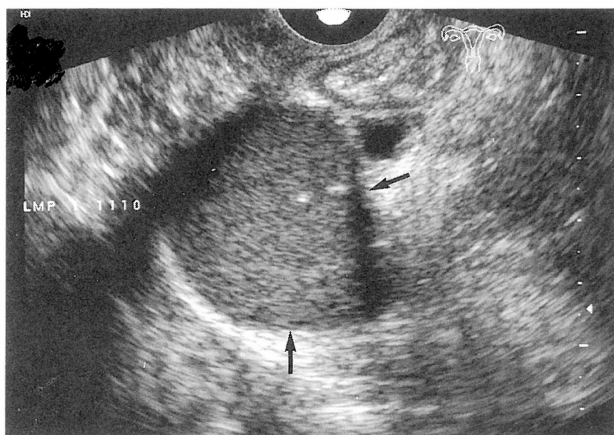
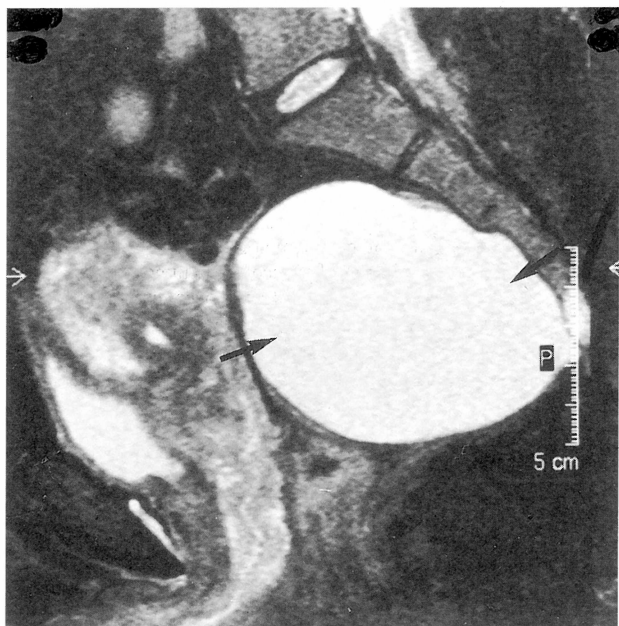


Figure 1. — Transvaginal US in patient 1 shows a complex mass with internal echoes (arrows).



Figure 2. — CT demonstrates a hypodense, well-defined presacral mass (arrows) in patient 2.

Figure 3 A,B — Sagittal T<sub>1</sub>-weighted (TR/TE: 500/16) (A) and STIR (TR/TE, T1:1620/70/180) (B) images show a tail-gut cyst (arrows) in patient 3.

vinced that in women the best surgical approach should be the posterior presacral one. The extraperitoneal resection leaves the reproductive female system undisturbed. Resection of the coccyx may be indicated for removal of TGC remnants that invade the bone, and to allow better visualization of the presacral space. An abdominosacral approach is recommended for lesions larger than 5 cm.

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