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Case Report

Congenital tail gut cyst presenting as a gluteal swelling in a toddler: A case report

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ABSTRACT

Background: In infants and young children, tailgut cysts often present as an incidental finding or as a progressively enlarging mass in the sacrococcygeal or gluteal region. Due to their rarity, they are frequently misdiagnosed as other congenital or neoplastic lesions, leading to delays in diagnosis and management.

Case Presentation: A 1.5-year-old male was referred for a left buttock swelling. Ultrasound suggested a fluid collection. Subsequent MRI revealed a 75 x 54 x 57 mm peripherally enhanced lesion in the pelvis, posterior to the rectum, extending into the right ischiorectal fossa and perineum. Incision and drainage revealed a straw-colored fluid within a cystic cavity with a white glossy surface. A wall biopsy confirmed a tailgut cyst, with no malignancy. The cyst was completely excised, and histopathology showed fibroadipose tissue lined by cuboidal epithelium and smooth muscle bundles without neural plexi.

Conclusion: Tailgut cysts are rare congenital lesions and may simulate other lesions. The case emphasizes the need for awareness of tailgut cysts as a differential in cases with gluteal collection without classical stigmata of abscess.

Keywords: Retrorectal cystic hamartoma, Tailgut cyst, Gluteal region, Infant, Ischiorectal fossa.

INTRODUCTION

Tailgut cysts, also known as retrorectal cystic hamartomas, are rare congenital lesions that arise from remnants of the embryonic post-anal or tailgut structures [1]. These cysts are typically located in the presacral or retrorectal space and are more commonly reported in adults—particularly women—with only a few cases described in the pediatric population [2]. Due to their rarity, they are frequently misdiagnosed as other congenital or neoplastic lesions, leading to delays in diagnosis and management [3].

Clinically, tailgut cysts may be asymptomatic or present with nonspecific symptoms such as pain, swelling, infection, or compressive effects on adjacent structures. Imaging modalities such as ultrasound, MRI, and CT scans play a crucial role in determining the cystic nature and anatomical location of the lesion [4]. Histopathological examination remains the gold standard for definitive diagnosis, typically revealing a cyst lined by various types of gastrointestinal epithelium.

This case report highlights a rare presentation of a tailgut cyst in a 1.5-year-old child, emphasizing the diagnostic challenges and the importance of early surgical intervention to prevent complications.

CASE REPORT

A 1.5-year-old male was referred to the pediatric surgery department by his pediatrician for evaluation of a swelling on his left buttock. The parents reported no history of fever, pain, or trauma. There were no associated symptoms such as changes in bowel or urinary habits, weight loss, or systemic illness. The

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child's medical history was unremarkable, with no prior surgeries or significant hospital admissions.

On physical examination, a fluctuating, normothermic, and non-tender swelling was noted on the left buttock. There was no erythema over the swelling, and the overlying skin appeared normal. Neurological examination revealed no deficits, and the child had normal fecal and urinary continence. Abdomino-pelvic examination was unremarkable.

An initial ultrasound of the swelling raised suspicion of a fluid collection. To further characterize the lesion, a magnetic resonance imaging (MRI) scan of the pelvis with intravenous contrast was performed. The MRI revealed a 75 × 54 × 57 mm peripherally enhancing abnormal lesion in the pelvis, posterior to the rectum, extending into the right ischiorectal fossa and perineum. The lesion was compressing the right gluteal muscle, and the imaging findings were consistent with a pelvic abscess or another cystic lesion.

Based on the clinical and radiological findings, an incision and drainage procedure was planned under general anesthesia. Aspiration of the lesion yielded turbid fluid. Subsequently, incision and drainage revealed a straw-colored fluid within a well-defined cystic cavity with a white, glossy inner surface. A wall biopsy was taken, and the cavity was thoroughly drained. The wound was closed primarily. Histopathological examination of the biopsy specimen confirmed the diagnosis of a tailgut cyst, with no evidence of malignancy.

Given the benign nature of the lesion and the risk of recurrence, definitive surgical excision was planned three months after the initial procedure. During the second surgery, the cyst was completely excised from the pelvis, and the wound was closed over a suction drain. The postoperative course was uneventful, and the drain was removed on the fifth postoperative day. The child remained neurologically intact, with no compromise in fecal or urinary continence.

Histopathological examination of the excised lesion showed fibroadipose tissue lined by single to multiple layers of cuboidal epithelium, along with bundles of smooth muscle but without neural plexi. These findings confirmed the diagnosis of a tailgut cyst, with no evidence of malignant transformation.

DISCUSSION

Tailgut cysts, also known as retrorectal cystic hamartomas, are rare congenital anomalies that arise from remnants of the embryonic hindgut [2]. During early human development, the embryo possesses a true tail, which is most prominent at around 35 days of gestation (8 mm stage). This tail extends beyond the site of the future anus. Normally, the tailgut regresses by the eighth week of gestation; however, if this regression is incomplete, remnants may persist and give rise to tailgut cysts [5]. The age of presentation is mostly reported in adulthood, with a female preponderance, whereas only a few neonatal and infantile cases have been documented [1,6,7]. Presentation in early life usually corresponds to prenatal diagnosis or association with colorectal anomalies such as anal stenosis [8].

In children, tailgut cysts often present as a gluteal or perianal mass, as was the case in our 1.5-year-old male patient. This aligns with previous reports where tailgut cysts have been identified as incidental findings on imaging or as palpable masses. MRI is the preferred diagnostic tool, providing detailed imaging to assist in surgical planning. However, differentiating between a cyst and an abscess can be challenging, especially in rapidly growing lesions that affect limb movement [4].

Tailgut cysts exhibit a variety of histopathological features that are important for differential diagnosis. The cyst walls are typically lined by multiple epithelial types, including keratinizing or non-keratinizing squamous, columnar, ciliated, and transitional epithelium [9]. Additionally, tailgut cysts lack a well-defined muscular layer and myenteric plexus, distinguishing them from duplication cysts, which possess these features. These findings are consistent with the histopathology of our specimen.

The treatment of choice for tailgut cysts is complete surgical excision. This approach not only confirms the diagnosis but also prevents complications such as infection, fistula formation, and malignant transformation. Different surgical approaches may be used depending on the size, location, and characteristics of the cyst. The most common approach is the posterior para-sacral incision, typically used for complete removal of benign cysts located below the level of the third sacral vertebra [10]. For cysts that extend above the third sacral body or are adherent to surrounding structures, anterior-only, posterior-only, or combined anterior–posterior approaches may be required [7]. The chosen surgical approach depends on the cyst's size, location, and proximity to vital structures.

In our case, the cyst was successfully excised through an incision over the buttock after carefully marking the path of the sciatic nerve. Postoperatively, the child demonstrated good bilateral limb movement and intact anal tone, with no signs of nerve or sphincter injury.

Tailgut cysts are rare congenital lesions that may mimic other gluteal pathologies, creating significant diagnostic challenges. This case underscores the importance of considering tailgut cysts as a differential diagnosis in gluteal collections, especially when classical features of an abscess are absent.

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