



PARAMEATAL URETHRAL CYST: A RARE CASE SERIES.

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ABSTRACT

Para meatal cyst is a rare condition that cause pain and discomfort to the patient. we present a 3-case series detailing the clinical presentation, diagnosis, management..

KEYWORDS : Para meatal cyst

INTRODUCTION

Para meatal urethral cysts are rare benign lesions first described by Thompson and Lantin in 1956. This review will cover the literature on these cysts, including their etiology, clinical features, histopathological aspects, and treatment options. We will specifically present a case series who underwent complete surgical excision of a Para meatal urethral cyst. The cyst was successfully managed, and recurrence was effectively prevented through this approach.

Para meatal urethral cysts are uncommon and infrequently discussed in medical literature. These cysts develop along the lateral edge of the meatus and may occasionally occur bilaterally. Typically, these small cysts measure around 10 mm in diameter and can contain either opaque or clear fluid. While they can form at any age, they most commonly present during childhood. Para meatal urethral cysts are rare and infrequently documented in medical literature. The condition was initially reported by Lantin and Thompson in 1956, involving two male patients. Most subsequent cases have been documented in Japanese studies, though older reports from Koga and Arakaki in 1919 have been difficult to verify. Approximately 60 cases have been reported globally, with a notable retrospective study by Willis et al. in 2011, which analyzed 18 prepubertal boys with these cysts. These cysts may present with various symptoms, including disturbances in urinary stream, dysuria, acute urinary retention, or itching at the urethral meatus. In some cases, patients seek treatment for cosmetic reasons. Rarely, Para meatal urethral cysts may occur alongside urinary bladder calculi and symptoms like hematuria and dysuria. Painful intercourse has also been reported in isolated cases. The exact pathogenesis of these cysts remains unclear, but several hypotheses have been proposed:

1. Lantin and Thompson suggested that the cysts might arise from the separation of the foreskin.
2. Shiraki et al. and other researchers proposed that they result from occlusion of the paraurethral glands, a theory supported by our own findings.
3. Hill et al. proposed that infection could lead to the occlusion of the paraurethral duct.

Historically, trauma was not considered a likely cause. Para meatal cysts have been referred to by various terms, including apocrine cystadenoma of the glans, urethro mucoid cyst of the penis, or urethral/mucoid cyst. Some believe that median raphe cysts and Para meatal urethral cysts of the glans penis may be related. Recent studies have described potential structural anomalies and infections in these cysts.

Diagnosis often requires clinical examination, although additional techniques such as urography, urethroscopy, or voiding cystourethrography can provide more clarity and help

differentiate these cysts from other conditions like inflammatory changes, periurethral abscesses, and various cystic lesions.

Histologically, the cyst lining may consist of columnar, transitional, squamous, or cuboidal epithelium, depending on the location in the urethra. Immunohistochemical analysis has shown that these cysts are linked to the male sex glands.

In females, Para meatal urethral cysts can be associated with estrogen abnormalities, and some cases have presented with symptoms like vaginal bleeding and premature breast development. There is debate about the frequency of this condition between sexes, though it is generally more common in males.

Management options include observation, needle aspiration, or marsupialization, though these methods may be associated with recurrence. Complete surgical excision is preferred for minimizing recurrence and achieving a good cosmetic outcome. Postoperative recovery is typically straightforward, though rare complications, such as stenosis, have been reported.

Case Presentation

Case Report 1

A 39-year-old male presented with swelling in his external urethral meatus of size 1.2cm for the past 2 years which is asymptomatic. He did not have any difficulty in urination or painful intercourse. Examination revealed soft cystic swelling arising from the left lateral side of the external urethral meatus with normal findings of the penis, scrotum, and perineum and no lymphadenopathy. Blood and urine analyses were found to be normal. Ultrasound local part showed no vascularisation, septation or solid areas except for hypoechoic cystic mass. We proceeded with surgical excision under local anaesthesia. Using 30 catgut edges were sutured and done under antibiotic cover. Postoperatively, the wound healed with a better cosmetic outcome. Histopathology reports of the cyst wall lined with squamous and columnar epithelium. After a year of follow-up, there has been no sign of recurrence.

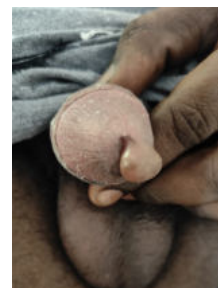


Figure 1: Parameatal cyst arising from the left side of the external urinary meatus.

Case Report 2

A 28-year-old male came to the emergency department with complaints of Cystic swelling adjacent to the external urethral meatus of size 1 cm and had pain during coitus with a threatened breach of the cyst. On further detailed history, he revealed swelling was present for the past 1 year with difficulty in intercourse. Clinical findings showed cystic swelling of size 1*1 cm from the ventral margin with mild tenderness on palpation with no sign of infection or inflammation. The patient was taken up for surgery under local anaesthesia, the cyst was removed, and the wound margins were carefully sutured with a catheter in situ. On Histopathological examination, the Cyst wall is lined with squamous and columnar epithelium.



Figure 2: Parameatal cyst arising from the lower part of the external urinary meatus.

Case Report 3

A 17-year-old boy presented in OPD with swelling arising from the right side of his external urethral opening for the past 7 months. He has distortion of the urinary stream which makes micturition cumbersome. While examining there was a nontender cystic swelling of size 1cm seen proximate to the left side of the external urethral meatus with normal external genitalia. Urine analysis and ultrasound KUB with post-void residual volume showed unremarkable results. Planned for total surgical excision of the cyst and proceeded under local anaesthesia. Edges were sutured with a catheter in position. HPE results showed a cyst wall lined with squamous and columnar epithelium. 1 year of follow-up showed recurrence so far.



Figure 3: Parameatal cyst arising from the left side of the external urinary meatus.

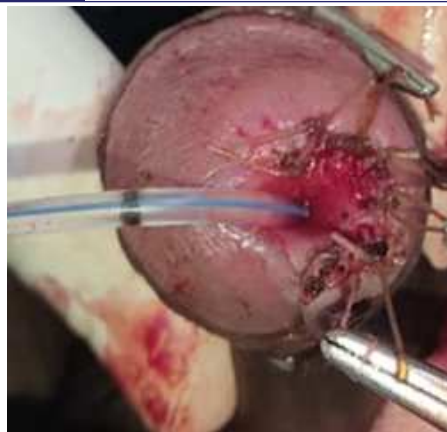


Figure 4: After excision

CONCLUSIONS

Para meatal urethral cysts are a rare, often benign condition that can cause a range of symptoms, from cosmetic concerns to urinary disturbances. Although they are typically asymptomatic, when symptoms are present, surgical excision remains the most effective treatment, offering excellent cosmetic and functional outcomes. Increased awareness of this condition can help reduce misdiagnosis and unnecessary interventions, leading to better patient care.

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