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Parameatal cyst: A rare benign congenital anomaly of the urethra

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Abstract
Parameatal cysts are rare benign lesions arising near the external urethral meatus, predominantly seen in male children. These cysts are congenital and usually asymptomatic but may present with urinary complaints such as dysuria, branched urinary stream, or retention. Their etiology remains unclear, although obstruction of the parameatal duct or failure of epithelial separation from the glans has been suggested. Diagnosis is largely clinical, and treatment options vary from observation to surgical excision. We report a case of a term male neonate diagnosed with a congenital parameatal cyst that was managed conservatively.

Keywords: Parameatal cyst, congenital urethral anomaly, pediatric urology, male neonate, conservative management

Introduction
Parameatal cysts are a rare, benign, congenital anomaly of the distal male urethra that can appear either at birth or during early childhood, often before puberty [1, 2]. These cysts may originate from blocked paraurethral ducts or as a result of incomplete epithelial separation of the prepuce and glans [3]. Histologically, they show various epithelial linings including columnar, transitional, or squamous epithelium [4]. Though usually asymptomatic, larger cysts can cause symptoms such as urinary retention, dysuria, or bifid urinary stream [5]. Awareness among pediatricians and urologists is important due to their uncommon nature and potential for misdiagnosis.

Case Report
A term appropriate-for-gestational-age male neonate was born via normal vaginal delivery to a G5P4L3 mother. APGAR scores were 7 and 9 at 1 and 5 minutes, respectively. The maternal antenatal period was uneventful, and there were no known teratogenic exposures or risk factors.
On initial physical examination shortly after birth, a translucent cystic swelling measuring approximately 2 × 3 mm was observed completely covering the external urethral meatus. The lesion was dome-shaped, fluid-filled, non-tender, and non-mobile. The rest of the genitourinary system appeared normal. No other congenital anomalies were noted.
Despite the cyst, the infant voided urine normally, and there were no signs of urinary tract obstruction or infection. On parental counseling, conservative management was decided upon given the asymptomatic nature of the lesion. The child is currently under regular follow-up with spontaneous resolution being monitored.

Discussion
Parameatal cysts, though rare, are an important differential diagnosis for masses near the male urethral opening in neonates and children [1, 6]. The exact etiology is unclear, but two major theories exist: one involves obstruction of the paraurethral ducts, and the other postulates incomplete epithelial separation at the coronal sulcus during development [7]. Histologically, they may be lined by urethral, glandular, or squamous epithelium [4].
Clinically, these cysts are often asymptomatic. When symptomatic, they can cause urinary stream distortion, pain during micturition, or even urinary retention [8, 9]. Spontaneous resolution has been reported in a number of cases.

However, if the cyst becomes symptomatic or causes parental concern for cosmesis, complete surgical excision is the treatment of choice and is generally curative without recurrence [1, 2, 10].

In our case, given the absence of symptoms and small size of the cyst, conservative management was chosen, and the family was educated about possible outcomes and red flags. Regular follow-up was scheduled to monitor for resolution or complications.

Early recognition is key to avoid unnecessary intervention or anxiety. Pediatricians should be aware of this benign condition and differentiate it from other urethral anomalies or cystic lesions.

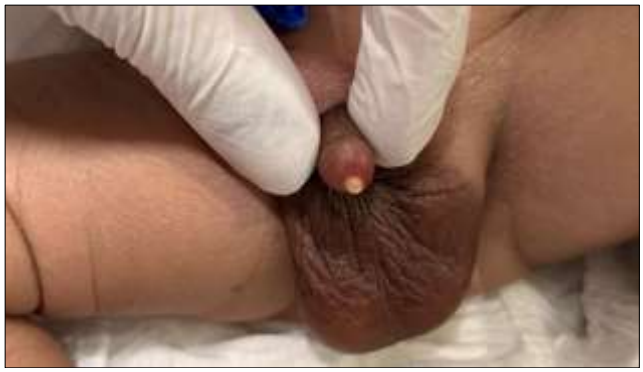

Fig 1: Congenital parameatal cyst

Conclusion

Parameatal urethral cysts, though rare, should be considered in the differential diagnosis of periurethral lesions in newborn males. These lesions are typically benign and often asymptomatic. Conservative management is appropriate in uncomplicated cases, but surgical intervention may be warranted for persistent or symptomatic cysts. Parental counseling and follow-up are crucial to ensure optimal outcomes and alleviate concerns.

References

1. Shaw SC, Vinod MS, Devgan A. Parameatal urethral cyst. Med J Armed Forces India. 2018;74(1):76-77.
2. Maliki A, Djatisoesanto W, Hoetama S, Santoso AD. Parameatal urethral cyst: A case series of three rare cases and literature review. Int J Surg Case Rep. 2023;107:108341.
3. Tirtayasa PMW, Samuel AG, Lisnawati, Retnowulan A. Parameatal glans cyst: A case report. Urol Case Rep. 2021;39:101802.
4. Sinha RK, Mukherjee S, Mitra N, Saha B, Kumar J. Parameatal cyst: A report of two cases and review of literature. Malays J Med Sci. 2015;22(6):71-73.
5. Kaselas C, Spyridakis I, Patoulias D, Tsioulas P, Patoulias I. Parameatal urethral cyst in a newborn: A case report and review of the literature. J Clin Diagn Res. 2016;10(1):SD01.
6. Neeli S, Patne P, Hiremath S, Kadli S. Parameatal cyst of glans penis. J Sci Soc. 2012;39(1):45.
7. Vendhan S, Neema S, Vasudevan B. Dermoscopy of parameatal urethral cyst. Indian Dermatol Online J. 2024;16(1):206-207.
8. Mrinal G, Anish G. Parameatal urethral cyst of the glans penis: A rare entity. Iran J Dermatol. 2015;18(2):69-70.
9. Aggarwal K, Gupta S, Jain VK, Goel A. Parameatal urethral cyst. Indian J Dermatol Venereol Leprol. 2008;74(4):430.
10. Tavukçu HH, Mangır N, Dokanakoğlu BÖ, Tarcan T. Parameatal urethral cyst: A case report. J Urol Surg. 2017;4(2):106-108.
11. Lal S, Ankur A. Parameatal cyst: Presentation of a rare case and review of literature. J Clin Diagn Res. 2013;7(8):1757-1758.

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