

Intratesticular cyst in an infant: Testis-sparing excision with excellent outcome

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Abstract

Intratesticular cysts in infants are rare and often raise concern for malignancy. We report a rare case of an intratesticular cyst in an infant managed with testis-sparing surgery. A 10-month-old boy with a right intratesticular cyst diagnosed by ultrasonography underwent complete cyst excision via a vertical scrotal incision. Histopathology confirmed a benign cyst. There was no recurrence, and testicular size was preserved at one-year follow-up. Selected intratesticular cysts in infants can be safely managed with organ-preserving surgery based on imaging features.

Keywords: Intratesticular cyst, Infant, Testis-sparing surgery, Paediatric urology, Ultrasound

Introduction

Testicular masses in infants are uncommon and often evoke fear of malignancy, leading to radical orchiectomy in many cases. However, pediatric testicular lesions differ significantly from adult counterparts, with a high proportion being benign.¹⁻³ Intratesticular cysts are particularly rare in infancy. High-resolution ultrasonography plays a pivotal role in differentiating cystic from solid lesions and in assessing malignant potential.⁴⁻⁵ Current evidence supports testis-sparing surgery for lesions with benign radiological features and normal tumor markers.⁶⁻⁸ We present a rare case of an intratesticular cyst in a 10-month-old boy successfully managed with complete cyst excision while preserving the testis.

Case Presentation

A 10-month-old boy presented with a painless swelling of the right testis noticed by his parents. There was no history of trauma, infection, or systemic illness. Physical examination revealed a firm, non-tender enlargement of the right testis with a smooth surface. The left testis was normal.

Scrotal ultrasonography demonstrated a well-defined, anechoic cystic lesion within the right testicular parenchyma, without solid components or increased vascularity, suggestive of a benign lesion (Figure 1).

Tumor markers were within normal limits. Based on these findings, a testis-sparing approach was planned. Through a scrotal approach, the testis was enlarged (Figure 2), and a vertical incision was made directly over the testis. The tunica albuginea was opened, revealing a well-encapsulated intratesticular cyst.

The cyst was meticulously dissected and completely excised while preserving the surrounding testicular tissue. Hemostasis was secured, and the tunica albuginea was closed (Figure 3).

The postoperative period was uneventful. Histopathological examination confirmed a benign cyst with no evidence of malignancy. At 1 year follow-up, the child remained asymptomatic, with normal testicular size and no evidence of recurrence on clinical examination and ultrasonography.

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DOI:

<https://doi.org/10.3329/dshj.v40i2.92651>

Received : 20 October 2024

Revised : 12 November 2024

Accepted : 14 November 2024



Figure 1: USG showing an intratesticular cyst

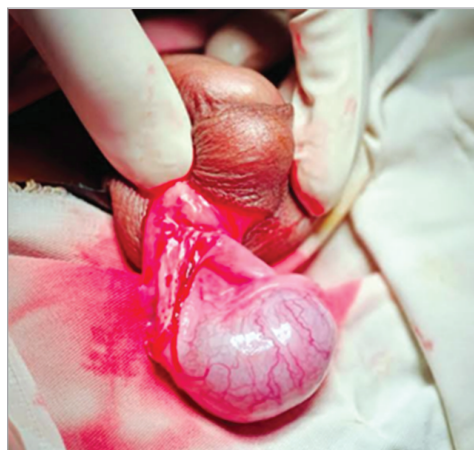


Figure 2: Enlarged testis with a cyst inside



Figure 3: Testis after removal of the cyst

Discussion

Paediatric testicular tumors differ significantly from adult counterparts, with a higher proportion of benign lesions.¹⁻³ Historically, many intratesticular masses in children were treated by orchiectomy. However, growing evidence supports organ-preserving surgery for lesions with benign imaging features.⁶⁻⁸ Preservation of testicular tissue is particularly important in infants to maintain future endocrine and reproductive function.

Ultrasonography is the primary imaging modality for paediatric scrotal pathology and reliably differentiates cystic from solid lesions.⁴⁻⁵ In the present case, typical ultrasonographic features of a benign cyst allowed confident planning of organ-preserving surgery. Complete excision through a vertical incision over the testis provided excellent exposure while minimizing damage to healthy parenchyma. Absence of recurrence at 1 year supports the safety and effectiveness of this approach.

Conclusion

Intratesticular cysts in infancy, though rare, can be safely managed with testis-sparing surgery when imaging suggests benign pathology. Careful preoperative assessment with ultrasonography enables organ preservation and avoids unnecessary orchiectomy.

References

1. Pohl HG, Shukla AR, Metcalf PD, et al. Prepubertal testis tumors: actual prevalence rate of histological types. *J Urol.* 2004; 172:2370-2372.
2. Shima H, Ikoma F, Yamamoto T, et al. Testicular tumors in children: a clinicopathological study. *J Pediatr Surg.* 1993; 28:915-918.
3. Elder JS. Testicular tumors in infants and children. *Urol Clin North Am.* 1995; 22:1-8.
4. Kocaoglu M, Frush DP, Bisset GS. Pediatric testicular lesions: sonographic and Doppler features. *AJR Am J Roentgenol.* 2003; 181:1137-1143.
5. Dogra VS, Gottlieb RH, Oka M, Rubens DJ. Sonography of the scrotum. *Radiology.* 2003; 227:18-36.
6. Ross JH, Kay R, Elder JS. Testis-sparing surgery for pediatric testicular tumors: a review. *J Urol.* 1996; 156:739-742.
7. Shukla AR, Woodard C, Carr MC, et al. Experience with testis sparing surgery for testicular teratoma. *J Urol.* 2004; 171:161-163.
8. Koyle MA, Walsh R, Canning DA, et al. Testis-sparing surgery for benign pediatric testicular lesions. *J Pediatr Urol.* 2010; 6:545-549.