Case Report

Transverse Testicular Ectopia – A Rare Entity: A Case Report and Literature Review

Bijay Kumar Suman, Ram Jeewan Singh, Keerthana Bachala, Rashi Rashi, Amit Kumar, Gaurav Shandilya, Amit Kumar Sinha

Department of Pediatric Surgery, AIIMS, Patna, Bihar, India

Abstract

Transverse testicular ectopia is a rare form of congenital urogenital anomalies. It is characterised by migration and descent of both testes through a single inguinal canal. Laparoscopy is useful for both diagnosis and management of transverse testicular ectopia. The surgical options for management are transseptal orchiopexy and transperitoneal orchiopexy. This article describes the case of a 2-year-old boy who had transseptal right orchiopexy for transverse testicular ectopia.

Keywords: Cryptorchidism, transverse testicular ectopia, undescended testis

Introduction

Transverse testicular ectopia is an extremely rare congenital anomaly. It is characterised by the presence of both testes in the same inguinal region or hemiscrotum. It is usually associated with other congenital abnormalities such as persistent Mullerian duct syndrome, true hermaphroditism, inguinal hernia, hypospadias and pseudo-hermaphroditism. Ultrasonography and diagnostic laparoscopy are useful in diagnosis. The treatment of transverse testicular ectopia is mainly surgery, including transseptal orchiopexy, transperitoneal orchiopexy and the repair of inguinal hernia along with other congenital anomalies.[1] About 300 cases of transverse testicular ectopia have been reported in published literature. This report is that of transverse testicular ectopia in a 2-year-old boy.

Case Report

A 2-year-old boy was brought by the parents with complaints of empty right hemiscrotum since birth. There was no history suggestive of testicular torsion in the past. On examination, the child was active and afebrile, and vital signs were within normal limits. On inguinoscrotal examination, fullness present in the left inguinal region. A firm mass, approximately 1 cm × 1 cm in size, was palpable in the left inguinal region. The left testis was palpable in the left hemiscrotum. The right hemiscrotum was poorly developed, but the phallus size was normal. No other genital abnormality was seen. Abdominal examination was normal. Routine blood investigations were normal. Ultrasound of the abdomen and inguinoscrotal region revealed

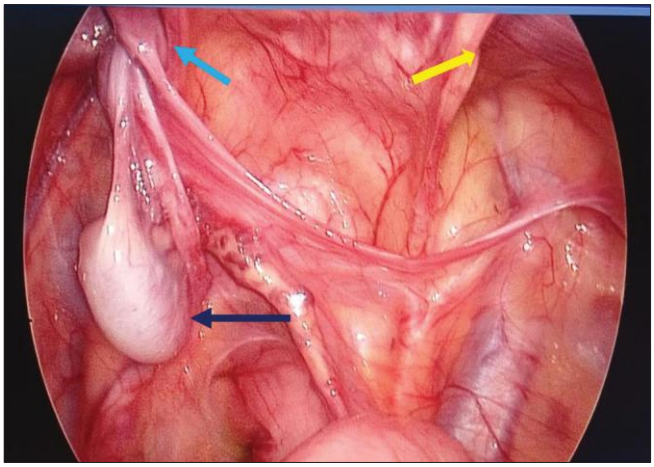


Figure 1: Laparoscopic picture showing the closed right deep ring (yellow arrow) and an open left deep ring with vas and vessels exiting through it (blue arrow). The right testis was peeping type (black arrow)

Address for correspondence: Dr. Bijay Kumar Suman, Department of Pediatric Surgery, AIIMS, Patna, Bihar, India.
E-mail: drsuman1011@gmail.com

Received: 22-04-2023 **Revised:** 14-11-2023 **Accepted:** 28-04-2025
Available Online: 15-07-2026

Access this article online

Quick Response Code:

Website: https://www.afrjpaedsurg.com

DOI: https://doi.org/10.67481/ajps.v22i2.1252

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: editor@afrpaedsurg.com

How to cite this article: Suman BK, Singh RJ, Bachala K, Rashi R, Kumar A, Shandilya G, *et al*. Transverse testicular ectopia – A rare entity: A case report and literature review. Afr J Paediatr Surg 2025;22(1):113-115.



Figure 2: Both testes in the left inguinal canal with Y-shaped thick fused common vas deferens and testicular vessels (yellow arrow)

an empty right hemiscrotum and both testes present in the left inguinoscrotal region. Following the clinical and radiological diagnosis of transvers testicular ectopia, the patient underwent surgical exploration. We also did diagnostic laparoscopy. This ruled out persistent Mullerian structures. It also established a closed right deep inguinal ring with no vessel structures transversing it and an open left deep inguinal ring with vas and vessels exiting through it [Figure 1]. No obvious Mullerian structure was seen. On left inguinal exploration, the testis of approximate size 1.5 cm × 1 cm was found near the deep ring; this was taken as the ectopic right testis. There were Y-shaped thick fused common vas deferens along with the left testicular vessels which were separated 3 cm above the right testis [Figure 2]. The left testis was placed and fixed on the ipsilateral pouch of the scrotum, and the right testis was pulled transseptal from the left side to the right hemiscrotum and then fixed with absorbable suture. The post-operative period was uneventful. The patient was followed up for 6 months. First, follow-up at 2 weeks for evaluation of oedema and scar. At 6-month follow-up, both testes were present in the scrotum of approximate size 1 cm × 1 cm.

Discussion

Transverse testicular ectopia is a rare congenital anomaly of testicular migration, where a testis descends into the opposite hemiscrotum. It is also known as crossed testicular ectopia. It was first described by Von Lenhossek. The incidence is one in 4 million in children. In our literature search, more than 300 cases have been reported.[2] The exact etiopathogenesis is unknown till now. Some proposed theories are that both testes may arise from the same genital ridge or an early adherence and fusion of Wolffian ducts during embryonic development or one of the testes during its descent causes the second testis to follow it.[3] Gauderer *et al*.[1] classified crossed testicular ectopia into three types, based on the presence of associated abnormalities: Type 1 is the most common type (40%–50%) and associated with inguinal hernia alone; Type 2 (30%) is associated with persistent or rudimentary Mullerian duct structures and Type 3 (20%) is associated with other genitourinary abnormalities without Mullerian remnants. Our case was Type 1 crossed testicular ectopia associated with inguinal hernia. It is rarely associated with persistent Mullerian duct syndrome; few cases have been reported in the literature.[4] The pre-operative diagnosis is usually done by ultrasound, computed tomography scan, magnetic resonance imaging, laparoscopy and venography or arteriography in case of very small testis. In our case, both testes were palpated in the left side. The provisional diagnosis was made by the ultrasound of both inguinal region and abdomen. Karyotyping may be required in cases of ambiguous genitalia and if associated with other congenital anomalies. This was not indicated in the reported case. The surgical management options are transseptal orchiopexy and transperitoneal orchiopexy. In transseptal orchiopexy, the ectopic testis is moved from the window created in the scrotal septum to the opposite side.[5] The more preferred approach is the transseptal orchiopexy technique. It is also known as Ombredanne's technique and algorithm of this technique was modified by Raj *et al*.[6] Intraoperatively, the surgeon should adopt a conservative approach to preserve the vas deferens and testicular vessels. Laparoscopy is useful in the diagnosis and treatment when the testes are not descended to the inguinal canal. It is also helpful to diagnose other associated congenital anomalies. Transseptal orchiopexy is recommended when there is fusion of the vas deferens. In our case also, vas deferens were fused; hence, transseptal orchiopexy was performed. It is rare, and in such cases, care must be taken to preserve the blood supply to the vas deferens and testes.[7] Patients usually need long-term follow-up because these patients may have future risk of subfertility, testicular atrophy and development of testicular malignancy.

Conclusion

Transverse testicular ectopia is usually associated with unilateral inguinal hernia with non-palpable contralateral testis. Ultrasonography is useful in diagnosis, but laparoscopy is helpful in both the diagnosis and management. Transseptal orchiopexy is the more preferred surgical technique. Long-term follow-up is needed due to future risk of infertility and testicular cancer.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient's parents have given their consent for images and other clinical information to be reported in the journal. The patient's parents understand that names and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Gauderer MW, Grisoni ER, Stellato TA, Ponsky JL, Izant RJ Jr. Transverse testicular ectopia. J Pediatr Surg 1982;17:43-7.
2. RajeshA,FarooqM.Ararecaseofmalepseudohermaphroditism-persistent mullerian duct syndrome with transverse testicular ectopia – Case report and review of literature. Int J Surg Case Rep 2017;37:72-5.
3. Moslemi MK, Ebadzadeh MR, Al-Mousawi S. Transverse testicular ectopia, a case report and review of literature. Ger Med Sci 2011;9:Doc15.
4. Ferri M, Ansari S, deMaria J. Persistent mullerian duct syndrome associated with transverse testicular ectopia. Can J Urol 1999;6:865-7.
5. Bothra JM, Shah HS, Jayaswal S, Sandlas G. Transverse testicular ectopia: A rare anomaly. J Pediatr Neonatal Care 2014;1:12-4.
6. Raj V, Redkar R, Krishna S, Tewari S. Rare case of transverse testicular ectopia – Case report and review of literature. Int J Surg Case Rep 2017;41:407-10.
7. Abdelmalak M, Waheeb S, Koraitim A, Mahdy D, ElMigeid DM. Two cases of transverse testicular ectopia in consanguineous boys. European J Pediatr Surg Rep 2018;6:e90-3.