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Case Report
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Bilateral Femoral Ectopic Testes: An Exceptionally Rare Presentation of Testicular Ectopia in a Child

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Abstract

Bilateral femoral ectopic testes are exceptionally rare congenital anomalies in which the testes deviate from the normal path of descent and lodge within the femoral canal. Fewer than a handful of bilateral cases have been described in the literature. We report a child presenting with bilateral groin swellings initially suspected to be inguinal hernias. Clinical examination and ultrasonography confirmed bilateral femoral ectopic testes. Surgical exploration with orchidopexy resulted in successful repositioning of both testes into the scrotum. This case highlights the importance of careful anatomical assessment of groin swellings in children and reinforces the need to consider ectopic testis in the differential diagnosis of femoral masses.

Keywords: Femoral Ectopic Testis; Bilateral Testicular Ectopia; Undescended Testes; Testicular Maldescent; Paediatric Urology; Orchidopexy; Groin Swelling; Femoral Canal; Aberrant Gubernaculum; Rare Congenital Anomaly

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Introduction

Testicular ectopia refers to aberrant testicular descent to an atypical location outside the normal inguinoscrotal pathway [1]. Common ectopic sites include the superficial inguinal pouch, perineum, femoral canal, and contralateral hemiscrotum [1, 2]. Femoral ectopia is among the rarest variants, and bilateral involvement is exceedingly uncommon [2]. Mis-diagnosis is frequent because femoral ectopic testes may mimic inguinal hernias, lymphadenopathy, or lipomas [1]. Early recognition is essential to prevent long-term complications such as infertility, torsion, trauma, and malignant transformation [1, 3]. This case contributes to the limited literature on bilateral femoral ectopic testes and underscores the diagnostic value of meticulous clinical examination [2].

Case Presentation

A one-year-old boy was referred to the combined pediatric surgical and urological clinic with bilateral groin swellings noted since birth. The swellings were non-tender, non-reducible, and had gradually increased in size. There was no history of pain, trauma, urinary symptoms, or systemic illness. The parents reported that the scrotum located and sandwiched between these two symmetric groin swellings appeared underdeveloped and empty since birth.

Examination revealed that the scrotum was bilaterally empty with well-formed rugae. Two firm, oval, mobile masses were palpable inferolateral to the pubic tubercle, lying below the inguinal ligament, consistent with the femoral triangle. The masses were non-reducible and did not exhibit cough impulse. No signs of torsion, erythema, or tenderness were present. External genitalia were otherwise normal.

Investigations in the form of high-resolution ultrasound with color doppler demonstrated two homogenous, ovoid structures with echogenicity typical of testicular tissue. Both structures located within the femoral canal, superficial to the femoral vessels. Normal vascular flow on Doppler imaging. No associated hernia sac or lymphadenopathy.

Additional tests included hormonal profile (LH, FSH, testosterone) was within age-appropriate limits. Karyotype was 46,XY (performed to exclude disorders of sex development due to bilateral non-palpable testes).



Figure 1: Clinical photograph - Note bilateral femoral ectopic testes with normal looking but empty and flat rugose skin normally developed scrotum.

Differential diagnosis considered were inguinal or femoral hernia, undescended testes (inguinal canal or intra-abdominal), lipoma of the spermatic cord, enlarged lymph nodes, soft-tissue tumours (rare) (Figure 1).

Treatment

The patient underwent bilateral surgical exploration under general anaesthesia.

Intraoperative findings observed were as follows

- Both testes were located within the femoral canal, lateral to the lacunar ligament.
- The gubernaculum was elongated and aberrantly attached to the femoral fascia.
- Spermatic vessels and vas deferens were of adequate length and calibre.
- No hernia sac was identified.

Procedure

- Careful dissection freed each testis from the femoral canal.
- The testes were mobilised proximally to the internal ring.
- Standard orchidopexy was performed with placement of each testis into a sub-dartos pouch in the scrotum.
- Fixation sutures were placed to prevent re-ascent.

The postoperative course was uneventful.

Outcome and Follow-Up

At 6-month follow-up, both testes remained in the scrotum with normal size and consistency. Doppler ultrasound confirmed preserved vascularity. The child had normal developmental milestones and no recurrence of groin swelling.

Long-term follow-up was recommended annually to monitor testicular growth, fertility potential, and malignancy risk till adolescent period and to be handed over to the transitional care to adult urology team.

Discussion

This case describes an unusually rare form of testicular ectopia, with both testes located within the femoral canal—an anatomical variant scarcely reported in the literature [4]. The case highlights the diagnostic challenges posed by groin swellings in children and reinforces the importance of meticulous clinical examination and targeted imaging [5, 6].

Early recognition and timely orchidopexy are essential to optimise long-term fertility potential and reduce the risk of complications [7].

We believe this case will be of significant interest to paediatric surgeons, general surgeons, urologists, radiologists, and clinicians involved in the assessment of paediatric groin pathology. It adds meaningful insight to the limited body of evidence on bilateral femoral ectopic testes and provides practical learning points for everyday clinical practice [8].

Testicular descent is a complex process involving hormonal, mechanical, and anatomical factors [3]. Ectopic testes deviate from the normal path after passing through the external inguinal ring [1]. Femoral ectopia is believed to result from misguided gubernacular attachment to the femoral fascia, abnormal migration of the gubernaculum, or mechanical obstruction within the inguinal canal [1, 3].

Bilateral femoral ectopia is exceptionally rare, with only isolated cases reported [2]. The diagnosis is primarily clinical, supported by ultrasonography. MRI may be used in ambiguous cases [1].

Early orchidopexy is recommended to preserve fertility potential, reduce malignancy risk, prevent torsion and trauma, and improve cosmetic and psychological outcomes [9]. This case reinforces the need to consider ectopic testis in the differential diagnosis of groin masses, especially when the scrotum is empty [10].

Learning Points

- Femoral ectopic testis is a rare cause of groin swelling and may mimic hernias or lymphadenopathy.
- Bilateral femoral ectopia is extremely uncommon and requires high clinical suspicion.
- Careful examination of the groin and scrotum is essential in any child with groin masses.
- Ultrasonography is a valuable diagnostic tool for localising ectopic testes.
- Early orchidopexy yields excellent functional and cosmetic outcomes.

Conclusion

Bilateral femoral ectopic testes are exceptionally rare and easily mistaken for more common causes of groin swelling. This case emphasises the importance of careful anatomical localisation in any child presenting with groin masses and an empty scrotum. High-resolution ultrasonography is invaluable for confirming testicular position, while timely orchidopexy offers excellent functional and cosmetic outcomes. Greater awareness of this unusual variant of testicular ectopia can help clinicians avoid misdiagnosis and ensure early, appropriate surgical management.

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