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Letter to Editor

Late-diagnosed complete intravaginal testicular torsion with preserved blood flow and viable testis in an adolescent



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To the Editor.

Testicular torsion (TT) is an emergency caused by the twisting of the spermatic cord. In addition to being complete, TT can be partial or intermittent. The degree of spermatic cord twist in partial or incomplete TT is < 360°. In intermittent TT, the degree of spermatic cord twist is \geq 360°, but spontaneous resolution occurs after a short time. In the mentioned forms of TT, color Doppler ultrasonography (CDS) shows a subtle decreased blood flow or flow that appears symmetrical with the contralateral testis. In contrast, complete TT results in testicular ischemia due to compromised blood flow to the affected testis. The resulting ischemia can be seen on the CDS as absent or markedly diminished blood perfusion.² However, cases of TT with preserved intratesticular blood flow on CDS have also been reported, primarily in patients with partial or intermittent TT with recurrent testicular pain^{3,4} or, as in our case, with a complete TT. The duration of symptoms and the degree of twisting of the spermatic cord are the main predictors of the vitality of the affected testis.⁵ However, some anatomical variables may be associated with prolonged preservation of blood flow in TT.⁴ Bentley et al suggested that a thicker spermatic cord and fixation of the testis allow testicular blood flow to be maintained for an extended period despite spermatic cord torsion.4

We report a 15-year-old boy who presented to our hospital with a >24 h history of testicular pain and scrotal swelling. He denied a history of scrotal trauma. Physical examination revealed marked swelling and tenderness of the left scrotum. The left cremasteric reflex was absent. The position of the left testis in the scrotum could not be determined due to marked swelling. His laboratory tests showed slightly elevated C-reactive protein (6.2 mg/L) and mild leukocytosis (16.2 \times 10 $^9/L$). Scrotal ultrasonography showed the oblique position of the left mildly enlarged testis. A tortuous redundant cord surrounded by a hydrocele at the superior aspect of the testis was observed. Scrotal CDS demonstrated preserved

intratesticular blood flow. Since TT could not be confidently excluded, the patient had immediate surgery. A 3-cm longitudinal incision was made in the right anterior scrotal wall. On exploration, we found a hydrocele with a 540-degree counterclockwise intravaginal TT and a thick spermatic cord (Fig. 1). The testis appeared grossly viable even before its detorsion (Fig. 1), and orchidopexy was performed to complete the operation. The postoperative course was uneventful, and the patient was discharged 24 h after the surgery. A follow-up testicular scintigraphy three months after surgery revealed normal testicular perfusion. The patient was followed up for a year with no abnormalities during the physical examination and ultrasonography.

We conclude that the TT diagnosis continues to be challenging. Patients with preserved testicular perfusion and twisting of the spermatic cord are a unique subset with specific anatomical features, making them a particularly risky group for missing the diagnosis of TT in the case where too much emphasis is placed on scrotal CDS.

Declaration of competing interest

The authors have no conflict of interest associated with the current manuscript.



Fig. 1. Intraoperative finding of complete intravaginal testicular torsion with viable testis.

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