

Clinical Perinatal/Neonatal Case Presentation



Testicular Torsion in a Pre-Term Neonate

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CASE PRESENTATION

A 33-week-old male infant of appropriate status for gestational age, was born vaginally to a 28-year-old gravida 2, para 2 Latino woman after the onset of premature labor. Birth weight was 1724 gm with Apgar scores of 7 at 1 minute and 8 at 5 minutes. The newborn was alert with spontaneous respirations, but had mild intercostal and subcostal retractions requiring external oxygen

support. The rest of the examination was unremarkable except for a discolored firm mass, found within the right hemiscrotum, that did not transilluminate. The left testis was in a descended position but of appropriate size and consistency. A testicular ultrasound (Figure 1) demonstrated an enlarged hypoechoic right testicle, and Doppler flow analysis revealed decreased to absent arterial blood flow. Surgical exploration performed within 6 hours uncovered a torsive necrotic right testis. Orchiectomy and contralateral orchiopexy were performed.

THE CASE IN CONTEXT

Torsion of the testicle in the prenatal or postnatal period is a relatively rare event.¹ Since its first description in 1897 by Taylor,² nearly 100

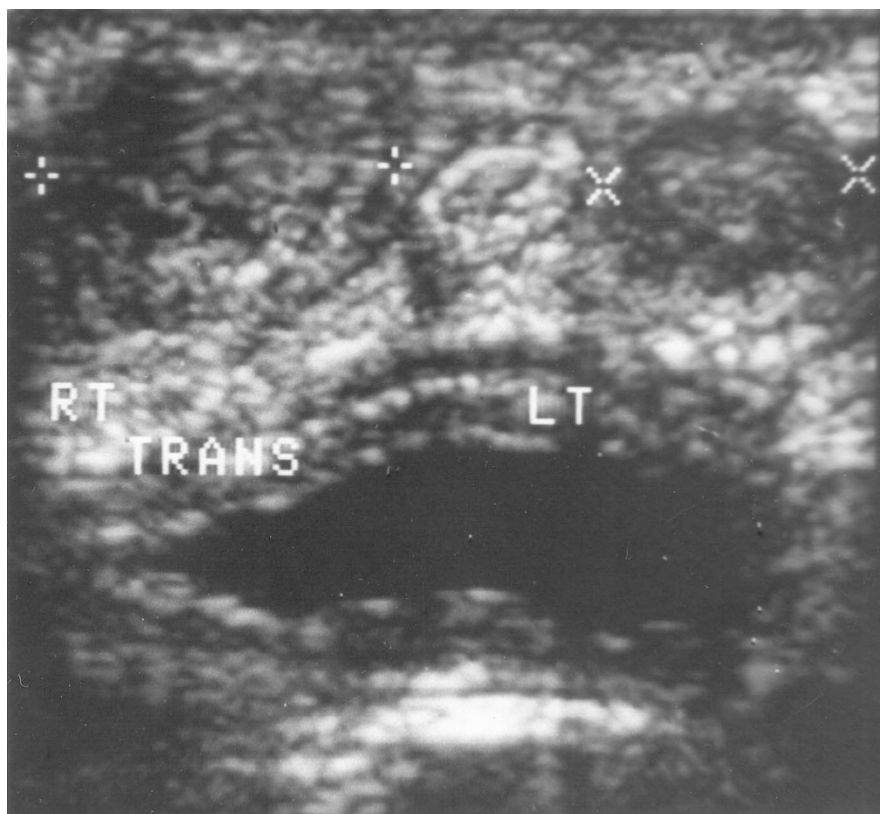


Figure 1 The right testicle is larger (13 mm vs 9.6 mm) in diameter and slightly more hypoechoic. *RT*, right; *LT*, left; *TRANS*, transverse section.

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cases have been reported. The typical clinical presentation is that of a discolored scrotum with a scrotal mass that does not transilluminate. In contrast to postnatal torsion, which is marked by tenderness and swelling, neonatal torsion is often asymptomatic.³ Prenatal torsion is unrelated to gestational age or low birth weight and is extravaginal in the majority of cases.¹ A frequently suggested explanation is that loose attachment of the testicular tunic to the scrotum during the in utero and perinatal period permits free rotation of the testis predisposing to torsion. Because scrotal attachment is said to occur quickly after birth, extravaginal torsion is unlikely beyond the newborn period.¹ Torsion can result in ischemia with loss of spermatogenesis in 4 to 6 hours and loss of hormonal function in 10 to 24 hours.⁴ Ultrasonography has proven to be a valuable tool in diagnosis, and a recent article reports on the value of power Doppler imaging in delineating between viable and nonviable testes.⁵ Unfortunately, the likelihood of finding a viable testis in the neonate is extremely remote even with rapid intervention. Surgical exploration, however, is the only means of confirming the diagnosis and distinguishing other conditions, including epididymo-orchitis, meconium peritonitis, hernia, hematocele, torsion of the appendix testis or epididymis, and benign or malignant neoplasms. Early orchiectomy is suggested because, if left in the scrotum, the nonviable testis may induce autoantibodies that could potentially affect the fertility of the remaining testis.² The need for contralateral orchiopexy is controversial due to the belief that neonatal torsion is exclusively extravaginal. Adhesions develop between the tunica vaginalis and dartos within a few weeks of age, thus theoretically obviating the need for contralateral orchiopexy. However,

neonatal torsion is not exclusively extravaginal and attempts to distinguish extravaginal torsion from intravaginal torsion based on gross histologic findings are unreliable.⁶ Additional arguments for contralateral orchiopexy include a large risk for subsequent torsion in the contralateral testis, unsuspected bilateral torsion, and low perioperative morbidity.

Neonates diagnosed with testicular torsion should undergo surgical exploration for confirmation of the diagnosis, orchiectomy, and contralateral orchiopexy. This may result in protection of the contralateral testicle from torsion and possible deleterious immunologic responses.

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