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Neonatal Testicular Torsion: A Case Presentation and Clinical Pearls

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Abstract

Testicular torsion happens when the spermatic cord is twisted, usually due to the testicle not being properly anchored within the scrotum. This twisting of the spermatic cord can lead to testicular ischemia and or necrosis ending with a detrimental outcome of a testicular loss. Testicular torsion commonly happens at two distinct phases (though it can happen at any age), at neonatal and at puberty phases. Neonatal testicular torsion is rare occurrence and occurs within the initial 30 days of life. No matter how rare neonatal testicular torsion is, it is crucial that the first examiner of the neonate performs a thorough testicular examination to avoid a detrimental outcome of a neonate losing a teste for life.

Keywords: neonatal testicular torsion, testicular torsion, newborn, neonate

1. Introduction

Neonatal testicular torsion, based on the timing of the occurrence, is divided into two groups: Prenatal (nonacute) event and postnatal (acute) event (2025). Prenatal testicular torsion happens in utero thus it is classified as a "nonacute" event. This testicular torsion, in general, can be "picked up" during the initial newborn exam. At times, this nonacute testicular torsion can present as a "nonpalpable" or "undescended" testis because the torsed testis may have atrophied in utero depending on when the torsion took place (Brenner, 2025). This prenatal, nonacute, testicular torsion is further complicated by the fact that antenatal ultrasound can identify the problem in utero.

Postnatal, or acute, testicular torsion, the torsion occurs during or after birth. In this category, the newborn's testicle was noted to be normal during the newborn examination and later a change is noted. In situation, if the torsion is detected early or in a timely manner, intervention is thought to potentially be beneficial in salvaging the effected testis.

Neonatal testicular torsion, though rare, can result in testicular ischemia leading to injury, and if not corrected emergently, necrosis and testicular loss. Huang et al. (2024) found 5% to 12% of pediatric testicular torsion happened in the first year of life of which 60% occurring either prenatally or within the first month of life. Although emergent intervention like surgery is usually the recommended treatment for testicular torsions in general, this intervention is controversial for neonatal testicular torsion (Hittelman, 2025). The debate centers around different opinions on whether surgery can successfully save the torsed testis, especially if the torsion had occurred in utero. However, when both testes are affected with the torsion, the outcome can be detrimental to the child as he can become infertile for life. In general, a diagnosis of testicular torsion is made clinically.

Testicular torsion in the neonatal phase can be challenging to diagnose given the fact that the newborn may not be presenting with all the signs and symptoms of a testicular torsion that are sometimes noted in the puberty phase patients like nausea or vomiting. This is further complicated by the fact that newborns are not able to "verbalize" the symptoms as an older child would. Tao, Cao, and Yu (2025) noted that early recognition of neonatal testicular torsion is challenging as the clinical manifestations can be subtle in newborns. Testicular or scrotal tenderness or swelling might be misdiagnosed as hydrocele leading to a delayed emergency intervention and or treatment. Kylat and Ahmed (2022) noted that depending on the degree of the torsion, when ischemia is prolonged anywhere between 4 – 8 hours, irreversible injury can result.

It is essential that all newborns get a thorough initial examination from head to toes, including the testicular exam for the male newborns. Aside from ensuring that both testes are palpable and descended, assess for scrotal swelling, redness, or darker hue-colored scrotums (although this color may be seen in darker skin-colored patients). In their retrospective analysis of twenty-four neonates, Huang et al. (2024) found that clinical manifestations of neonatal testicular torsion include 75% had scrotal enlargement, 79% had changes in scrotal color, and 17% had crying upon palpation. A cremasteric reflex can easily be done by stroking the skin of the upper inner thigh. This maneuver will cause the muscle within the spermatic cord, the cremaster muscle, to reflexively contract thus elevating the testicle on the side the thigh is stroked. If a torsion is present, the testicle will not be elevating with the cremasteric reflex testing. If a neonatal testicular torsion is suspected, a cremasteric reflex should be performed.

2. A Case Presentation and Clinical Pearls

When seeing these newborns after delivery in the hospital, do not forget to "listen to" the parents for their concerns as some of those concerns may lead you to a proper diagnosis of this particularly important topic of neonatal testicular torsion. Case in point, this author saw a 7-day-old newborn male after he had one of his testicles surgically removed due to necrosis secondary to a torsion that was not picked up or diagnosed in a timely manner. The patient's father informed this author after this detrimental event at the 7-day-old visit that he had noted one of his son's testicle colors to be, "Not right. It looked purplish." According to the father, "No one made anything out of it" until the newborn left the hospital after delivery and presented to the private office for his newborn examination at day five of life. At this visit, the provider sent the patient to the Emergency Department immediately and requested that the patient be seen urgently along with the surgery consultation recommendation. However, due to the delayed proper diagnosis and intervention, the newborn's testis was not salvageable.

3. Case Discussion/Conclusion

Clinical takeaway for this case presentation is that, when you are the first person to "examine" the newborns, be sure to do a thorough examination (including the testicular exam of male newborns) and documentation of your findings. If a firm, swollen, or discolored scrotum is noted, prompt and proper interventions should be initiated. We have all been taught that, if you did not document it, it did not happen. Take a few minutes to ask and listen to the parents of any concerns they may have of their new baby. Although most concerns may just be "normal", we would not want to miss that one particular concern that went unheard of but turned out to have a devastating end result for the patient and their parents. If a neonatal testicular torsion is suspected, obtain an emergency pediatric urology consultation and order a STAT doppler ultrasound of the scrotums.

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