Bilateral Perinatal Testicular Torsion: An Acute Neonatal Emergency

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Introduction

- Neonatal testicular torsion is a rare entity: 6.1 per 100,000 and defined as a torsion that occurs prenatally and up to 30 days after delivery.
- Clinical presentation, management and outcome differ between prenatal and postnatal testicular torsion.
- LOA babies, vaginal and difficult deliveries, and post-term babies have higher incidence of torsion.
- In a review of 18 case series, only 19 out of 284 patients (8%) were bilateral.
- Overall, salvage rate was 9.96%. When operation is specified as an emergency, salvage rate may be as high as 21.7%. Salve of a testis torsed at birth is rare.

Case Report

- History: Born to a 19 yo G1P0001 Caucasian mother with a history of hypothyroidism and morbid obesity who received adequate prenatal care.
- Maternal labs: All prenatal labs were negative except for GBS positive, received adequate IAP.
- Delivered @ 41+1 weeks vaginally, AROM with track meconium-stained & foul smelling amniotic fluid, AFUAR 9/9.

Pertinent Physical Examination:

- TLoA: Weight 3900 g (>90%), Length 54 cm (>95%), 7 IN 4.35 cm (i.e.)
- HR 158/min, RR 68/min. T 100.0°F
- EGI: Normal sized penis, dark, enlarged and tense scrotum with tenderness bilaterally.

- Imaging:
  - Transillumination:
  - Doppler

Fig. 1: Negative transillumination of the left testicle

Fig. 2: Positive transillumination of the right testicle

- Testicular Ultrasound with Doppler

  1. Minimal if any internal blood flow within and abnormal echogenicity of the left testicle, suspicious for torsion. Moderate amount of complex fluid in the left side of the scrotum could represent hematocoele.
  2. Low level internal blood flow in the right testicle, suspect partial right-sided torsion. Moderate-sized right side hydrocele.

- Treatment - Bilateral scrotal exploration with detorsion and bilateral orchiopexy:
  - Torsion scrotal mass: Evident
  - Initial torsion was detorsed
  - Turica albunigia was thick and not blanching when compressed
  - Warm compresses placed around the spermatic cord for 15 min → Testis was revascularized, cut, still no blood evident → Doppler US also did not show vascular flow → Opposite side was approached in the same way with findings similar to Bilateral orchopexies.

Fig. 3: Scrotal findings depicting enlarged, tender, erythematous scrotal sac.

Fig. 4: Bilateral necrotic testes upon surgical exploration

Discussion

- Its II – defined presentation and lack of prospective studies have contributed to a lack of consensus [1].
- Exact mechanism is not known.
- It is postulated to result from the interplay between a hyperactive cremaster reflex and failure of adequate intrscrotal fixation of the tunica vaginalis to scrotal wall.
- Bilateral testicular torsion can be present with unilateral sign.
- Imaging studies such as testicular ultrasound with Doppler arterial flow might be helpful.
- With a high clinical suspicion of bilateral testicular torsion, emergency surgical exploration is suggested.

Conclusion

- Perinatal testicular torsion is a rare neonatal emergency and has the potential for serious consequences.
- It is prudent that family counseling is provided regarding physical and psychosocial complications.
- Emergent surgical exploration is indicated and should investigate both testes regardless of symptoms due to physical exam being too unreliable to ensure the contralateral testis is not torsed.
- Long term outcome is required by urology and/or endocrinology for future provision of prostatitis and evaluation for further treatment.
- Neonatal Testicular Torsion is still a hot research subject and is a source of debate regarding its proper management.

References

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