Management of neonatal torsion: shared decision making

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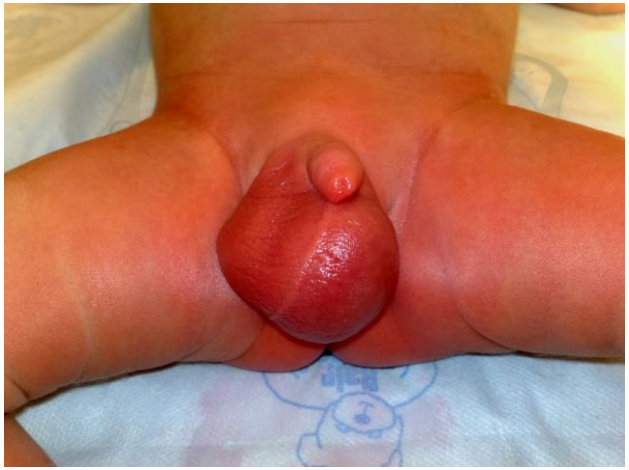

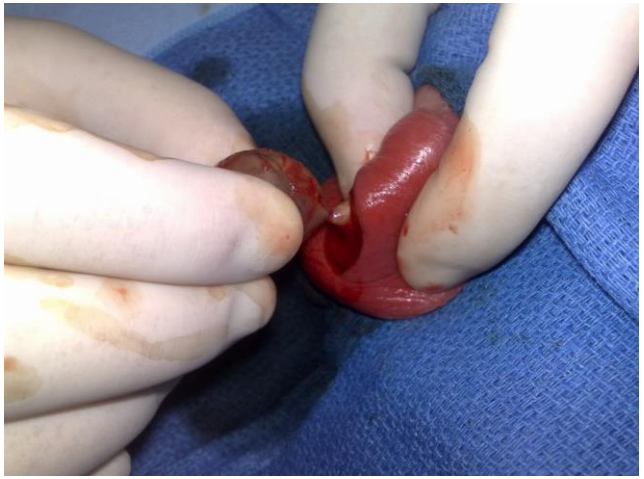

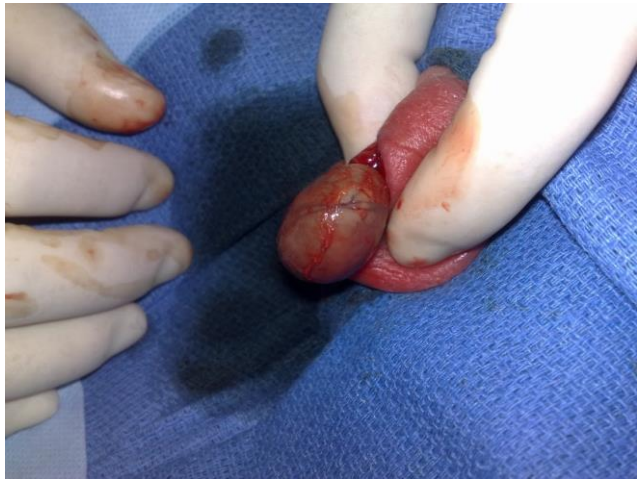

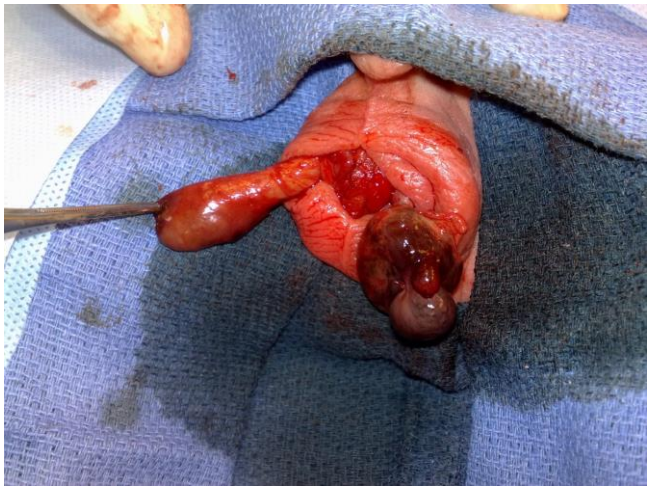

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Neonatal Torsion: Immediate Surgical Exploration versus Conservative Management

FROM THE GUEST EDITOR

Laurence S. Baskin, M.D.
Chief of Pediatric Urology and Professor,
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Neonatal torsion remains a controversial topic in pediatric urology. At the meeting of the Society of Pediatric Urology in San Francisco in May, a panel of experts was convened to debate the pros and cons of immediate surgery versus observation. Dr. Alan Retik has taken the position of immediate operative intervention. Dr. Howard Snyder has championed a non-operative approach unless an acute process can be demonstrated. Dr. Claire Brett addressed anesthetic issues in the newborn and Mr. Tom Donnelly addressed legal issues. Dr. George Kaplan moderated the session and prepared case examples for our panel of experts. I hope you enjoy the Dialogues from our experts on the controversies of neonatal torsion.

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- The case for surgery
- The case against surgery
- Litigation
- Anesthesia risks

- The case against surgery:
  - The likelihood of testis salvage is nearly zero
  - The risk of contralateral torsion is very low, after the first few months of life
- The case for surgery:
  - Fear of contralateral testis loss
  - Litigation

- Litigation:
  - Documentation, Standard of care, informed consent
  - "Patients will accept a lot of complications if they truly believe that their physician is working with their best interest or their child's best interest in mind"

Anesthesia issues

- The younger the baby, the higher the risk
- Risk of perioperative cardiac arrest in neonates is much higher than other age groups (including the eldery)
  - Neonates with congenital heart disease have an even higher risk
- Postoperative apnea: ex-premature neonates are at a high risk for postop apnea until they are at about 60 wks post-gestational age
- Most major complications with neonatal anesthesia result from failed or complicated airway management.
- Spinal anesthesia offers no airway management, no narcotics, better hemodynamic stability, etc.

Emmett Whitaker, MD,
UVM, peds anesthesia

SA technique

- 4% lidocaine applied to back in preop
- 22/25 gauge spinal needle
- Subdural injection of 0.5% bupivacaine (1mg/kg)/clonidine (1 mcg/kg)
- Subsequent sedation if needed through peripheral intravenous catheter
- Baby breathes room air

Results

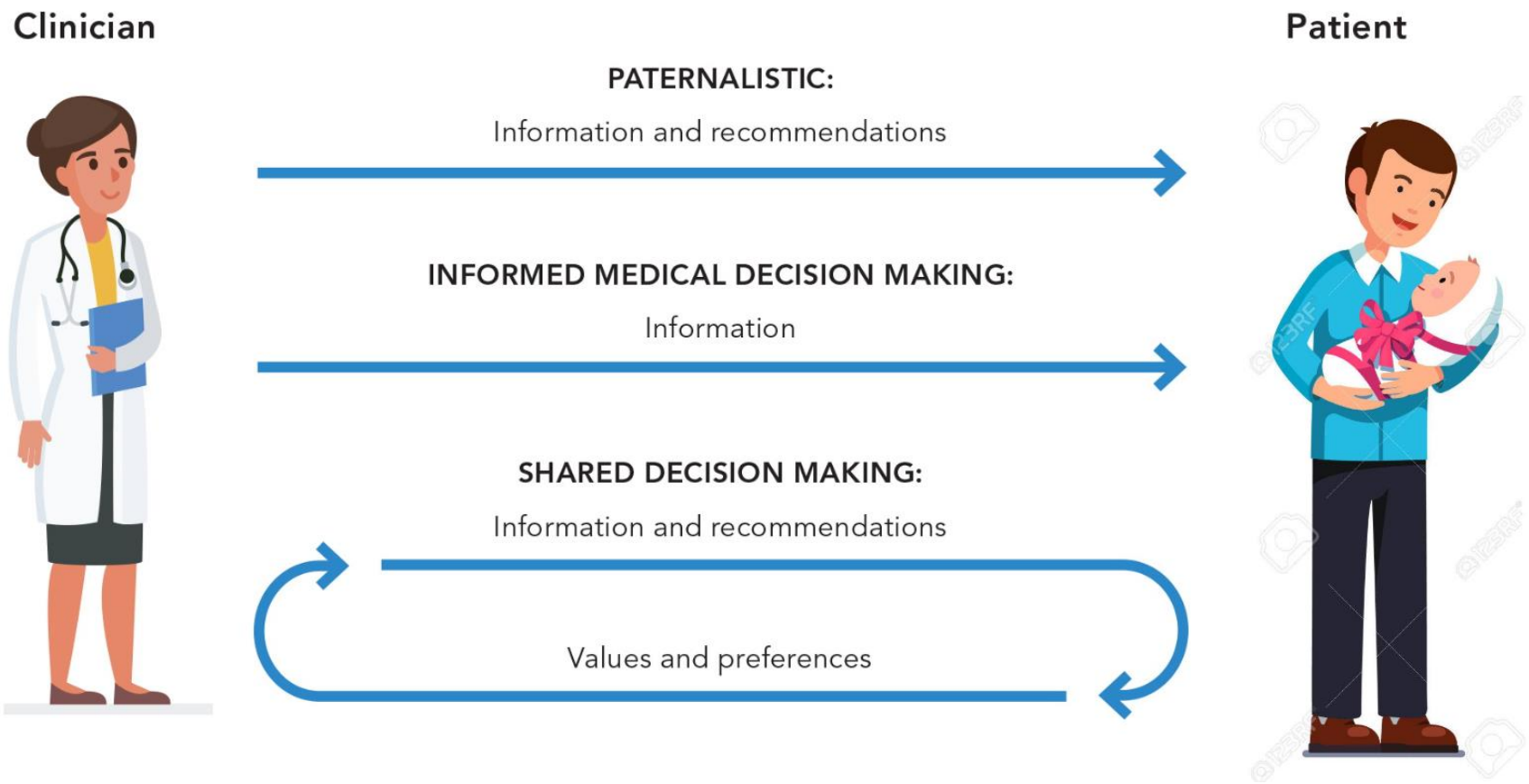
- Sept 2015 – Nov 2018
- 535 total attempted SA patients
- Mean age 7.7 months (0 - 38)
- 485/535 (90%) successful completion of surgery under SA
- 50 (10%) required GA conversion
- Reasons for conversion:
  - 19: inability to place spinal
  - 22: poor sensory/motor block
  - 6: suboptimal surgical conditions
  - 3 other/unknown

Spinal anesthesia sounds great, but...

- Not universally available, at nights and weekends
- Only 90% effective

- Even if you have a robust spinal program, one has to decide if the child "needs" surgery, and thus be prepared for GA

So what to do?



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- Information is shared with parents about
  - The very low likelihood of testis salvage
  - The low (but not zero) risk of metachronous torsion
  - The risks of surgery
  - The risks of anesthesia

Nonmedical issues to consider/discuss

- Are they comfortable having their new born undergo surgery if the risk of nonintervention is not great?
- Will mom be at birth hospital while baby is transferred to children's facility?
- What may the impact of neonatal surgery and subsequent hospitalization be on parents?
- What is most important for the parents?

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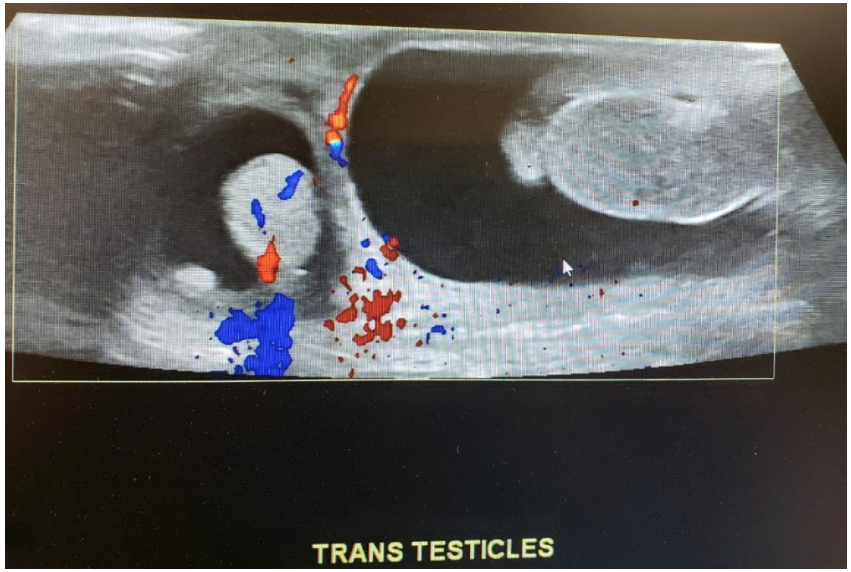
Personal bias

Unless parents voice an interest in emergent surgery in the newborn period

- I would recommend discharge home from newborn nursery
- Elective orchidopexy, preferably under spinal anesthesia within a few weeks

Case history

- 8 hour old born in remote hospital in western Iowa
- What to do?
  - No pediatric anesthesia
  - Nearest tertiary care hospital several hours away



The opinions voiced by those of us in large tertiary care centers will have significant impact on those who do not work in such centers, both medically and legally

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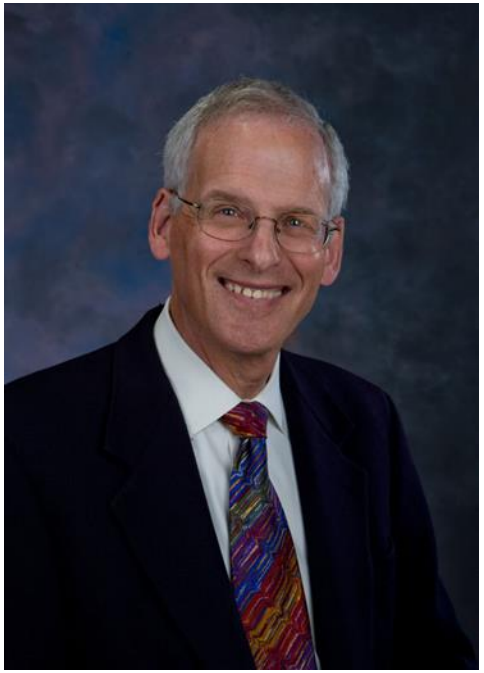
“It doesn’t matter so much what you do but why you do it”



Stephen A. Koff. M.D
2010 Pediatric Urology Medal
American Academy of Pediatrics

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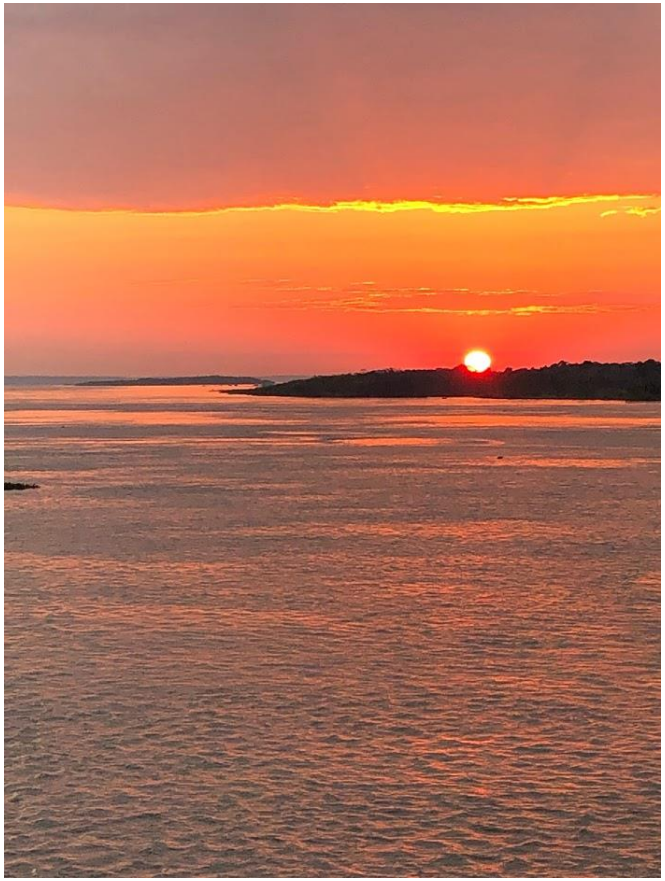
Thanks for listening!



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