Neonatal Spinal Anesthesia: A Community Hospital Experience
Sudhir Choudhary, M.D., Neil P. Ray M.D., Laura Paglia, C.R.N.A.

Background
1. We were frequently asked to provide anesthesia for elective neonatal circumcision in preterm infants less than 50 weeks post-conception.
2. Our local Medicaid plan only covers neonatal circumcision for the first 3 months of life or 49 weeks post-conception.
3. These patients had coexisting diseases that complicated delivery of general anesthesia and necessitated post-op apnea monitoring.
4. Recent literature has suggested that there may be long term cognitive changes in infants that have been exposed to general anesthesia.
5. After collaborating with our pediatric surgeons and neonatologists, spinal anesthesia for elective circumcision appeared to be a reasonable alternative to general anesthesia.

Method
1. LP was performed with infant in sitting position and with pulse-ox on.
2. Infant was calmed by soothing, stroking, pacifier dipped in sugar syrup, under-body convection warmer.
3. Successful spinal anesthesia was with return of CSF and profound motor weakness and no response to surgical stimulation.
4. 3rd attempt was by another provider; Converted to general after 3 attempts.
5. Failure to achieve CSF flow or effect of spinal anesthesia was considered unsuccessful spinal.

Pears
1. Be aware of airway obstruction.
2. Be careful above L3, where spinal cord ends.
3. Easy to be off midline because infant will move.
4. I.V. can be placed in lower extremity after spinal.
5. For Bovie-pad placement, turn the baby on the side; lifting the legs can cause high spinal.

Discussion
1. Spinal anesthesia is safe and a reasonable alternative to general anesthesia.
2. Spinal anesthesia expedites OR flow by minimizing the I.V. can be placed in lower extremity after spinal.
3. Infrequent intraoperative complications and our series had no episodes of post operative Apnea or Bradycardia.
4. Decreased number of hospital admissions for post-op apnea monitoring.
5. Spinal procedure inflicts the similar amount of pain as venipuncture or vaccines.
6. Infants resume PC feeding much quicker with spinal anesthesia vs general anesthesia.
7. Spinal taps in pediatric ER are done routinely as fever workup for infants under 28 days of age.

Dos & Don’ts
1. Don’t elevate legs to place bovie pad
2. Soothing music, sugar dipped pacifier, convection warmer are comforting to the baby.

Acknowledgement
1. David Lasko, M.D. for sharing his experience at Toronto Sick Children’s and recruiting surgical patients for spinal anesthesia.
3. PGH Perioperative Staff for supporting the project.

References
4. Fever Workup(>100.4 F) in Infant 0-28 days of age. (Rosen’s Emergency medicine, 7th ed:2008)
5. At what age is ambulatory surgery safe in infants? A survey of practices of pediatric anesthesiology programs in the united states. (SPA 2007 winter meeting/P20)