

**CAN REGIONAL ANESTHESIA HAVE AN EFFECT ON SURGICAL OUTCOMES ON PATIENTS UNDERGOING DISTAL HYPOSPADIAS SURGERY?**

Omar E. Soto-Avilés MD, Karina Escudero MD, Ceciliana De Andino MD,

Mario Vasquez MD, Juan C. Jorge PhD, Marcos Perez-Brayfield MD, FAAP

*Urology Section, Dept. of Surgery and Department of Anatomy and Neurobiology, School of Medicine, University of Puerto Rico Medical Sciences Campus, San Juan, PR*

**Background:** Caudal and penile blocks are the most popular regional anesthetic techniques used in infants and children undergoing urological surgery. A recent report has suggested that penile venous pooling resulting from caudal blocks could affect surgical outcomes after hypospadias surgeries. We report our experience in patients with distal hypospadias undergoing repair with caudal vs penile block.

**Methods:** A retrospective clinical database was constructed for patients who underwent distal hypospadias repair at our sponsoring institutions for the time period 2008-13 (n=192). All surgeries were performed by the same surgeon (MPB). Collected data included: hypospadias classification (glanular, coronal, sub-coronal), chordee status, perioperative anesthesia (caudal vs penile), and assessment of postoperative complications (fistula and meatal stenosis).

**Results:** The mean age for distal hypospadias repair was 11 months with mean f/u of 3 years. Close to 50% of the sample underwent caudal or penile anesthesia block for post-op pain control (n= 91 vs. 101, respectively). Thirteen cases (6%) required further interventions; where 11 patients had urethral fistulas and 2 patients had meatal stenosis. Most patients with urethral fistula underwent caudal anesthesia (n=9/11). Risk ratio analysis for all distal hypospadias cases revealed that there is a higher risk of developing complications in patients who underwent caudal anesthesia vs patients who underwent penile block. (Risk Ratio = 3.47 [95% CI 0.99-12.24])

**Conclusion:** Our distal hypospadias repair complication rate (6%) compares to contemporary series. We found that caudal anesthesia was associated with a higher risk of fistula formation after undergoing distal hypospadias repair. Further studies are required to elucidate whether regional anesthetic techniques should be adjusted according to severity of the condition.