Urology services

One of the leading pediatric urology programs in the country

Children’s Healthcare of Atlanta is home to one of the top pediatric urology programs in the country—treating patients from birth to age 21. Each year, our team manages 21,800 office visits, more than 3,900 surgical cases and more than 50 robot-assisted surgery cases. We have held leadership roles locally and nationally in various organizations, including the American Academy of Pediatrics, Societies for Pediatric Urology and American Association of Pediatric Urologists.

In addition, our team of pediatric urologists has published more than 300 peer-reviewed articles in literature and book chapters. On the following pages, learn more about the breadth of our knowledge and examples of our published research that changed how the following urologic conditions and procedures are managed.
ROBOTIC SURGERY

Outcomes of Robot-Assisted Extravesical Ureteral Reimplantation in the Pediatric Population

Robot-assisted laparoscopic (RAL) surgery has emerged as a safe, minimally invasive and effective alternative to open surgery—most commonly pyeloplasty and ureteral reimplantation. Complex RAL ureteral reimplantation has been shown to have similar clinical success and complication rates compared to complex open extravesical ureteral reimplantation. Prospective multi-institutional studies have demonstrated radiographic resolution on par with contemporary open series.


Surgical Scar Location Preference for Pediatric Kidney and Pelvic Surgery

Robot-assisted surgery may result in smaller scars compared to open surgery. However, it is important to note that the smallest incision is not always the patient’s preferred incision, particularly in young children when pain, length of hospital stay and blood loss may be equivocal among approaches. Patients clearly prefer hidden incisions, showing preferences for pfannenstiel for ureteral reimplantation and dorsal lumbotomy for pyeloplasty. Discussion of surgical treatment options should include scar length, location and relationship to undergarments.


VESICOURETERAL REFLUX

Endoscopic Injection of Dextranomer/Hyaluronic acid (Deflux) for Vesicoureteral Reflux (VUR)

Endoscopic injection of deflux is the safest and least invasive method of treating VUR. Endoscopic injection via the double hydrodistention implantation technique has emerged as a durable, highly successful, minimally invasive treatment with minimal associated morbidity. Our 17-year experience confirms excellent long-term results (median 8.4 years follow-up) with an overall clinical success rate of 89.2 percent, and 94.1 percent of parents reporting they were highly satisfied with the post-op results.


Vesicoureteral Reflux Index (VURx): A Novel Tool to Predict Primary Reflux Improvement and Resolution in Children

VUR grading alone misses key factors needed to more precisely predict VUR resolution. The VURx, which incorporates gender, VUR timing, anomalies and VUR severity, has become a validated method to accurately predict VUR resolution in children of all ages.

**COMPLEX UROLOGIC RECONSTRUCTIVE SURGERY**

**Prune Belly Syndrome**

Children with Prune Belly syndrome have significant comorbidities requiring frequent operative intervention, with disease heterogeneity necessitating an individualized approach. The modified Monfort abdominoplasty recognizes the pattern of abdominal muscular deficiency unique to each patient and incorporates this information into the surgical design. Magnetic resonance urography (MRU) provides anatomic and functional details of the urinary tract in children with Prune Belly syndrome, allowing for characterization of abnormalities not previously described in this patient population, including calyceal diverticula and renal dysplasia. Prune Belly syndrome profoundly impacts health-related quality of life in children and their caregivers. Future efforts aimed at health-related quality of life improvement are necessary and will help determine which urologic interventions positively influence patient-reported quality of life.


**Continent Urinary Diversion**

Lower urinary tract reconstruction can help patients with neurogenic bladder achieve continence and independence, while also maintaining safe storage pressures for long-term renal protection. Use of absorbable staples in sigmoid bladder augmentation decreases operating times and should be considered in pediatric patients undergoing colocystoplasty. Augmentation with continent urinary diversion at a young age (3 to 5 years old) does not increase the risk of complications or secondary surgeries. Families must be adequately counseled regarding the daily management responsibilities and potential risks associated with continent urinary diversion performed at any age.


**HYPOSPADIAS**

**Scoring Hypospadias with a Simple, Standardized, Reliable Tool to Predict Postoperative Outcomes and Need for Staged Surgery: The GMS and GUMS Scores**

Hypospadias is one of the most common congenital anomalies in boys. Yet, given the extensive variability in anatomy, predicting post-op outcomes can be challenging. It has become clear that meatal position alone is not adequate for outcome prediction. The Glans-Meatus-Shaft and Glans-Urethral plate-Meatus-Shaft (GUMS) scoring techniques have emerged as simple and effective tools with high inter-observer reliability to better characterize hypospadias and predict operative outcomes and need for staged repair. Computer-enhanced visual learning effectively teaches GUMS scoring and promotes uniform clinical practices in outcomes research and resident and/or fellow training.

MAGNETIC RESONANCE UROGRAPHY
MRU Is a Safe and Versatile Tool for Delineating Urinary Tract Function and Anatomy
MRU is a sophisticated, radiation-free imaging technique that provides detailed functional information and delineates complex anatomy in 3-D. This technique has been utilized effectively by our group for more than 15 years to define urinary tract function and anatomy in complex patients with Prune Belly syndrome, ureteral obstruction and duplication anomalies with or without ectopic ureters. MRU has also proven to be superior to dimercaptosuccinic acid (DMSA) scan in identifying renal parenchymal defects in children with VUR.


CIRCUMCISION
Suture-Less, Scalpel-Free Circumcision Is Cheaper, Faster and Better than Sutured Circumcision
Circumcision is one of the most common procedures in the United States. With low-power electrocautery to excise skin and Dermabond glue to reapproximate the skin edges, a high-quality circumcision can be performed safely in minutes with excellent cosmetic results.


CRYPTORCHIDISM
Scrotal Approach Orchiopexy
Scrotal approach orchiopexy is associated with shorter operative times, comparable success and complication rates, and a more cosmetically appealing result compared to the traditional inguinal approach. The percent of procedures performed through a scrotal incision at our institution increased over time with no increase in morbidity. Scrotal approach does not increase the risk of postop hydrocele or hernia. Although it is feasible to perform concurrent hernia repair through a scrotal approach, we prefer to utilize an inguinal approach in the setting of a clinical hernia.


*U.S. News & World Report

Visit choa.org/urology or call 404-252-5206 to learn more about any of these publications.