

UCSF

UC San Francisco Previously Published Works

Title

PEDIATRIC URETHRAL TRAUMA: EXPERIENCE AND OUTCOMES

Permalink

<https://escholarship.org/uc/item/8qj147jh>

Journal

Journal of Urology, 181(4)

ISSN

0021-0005

Authors

Voelzke, Bryan B

Breyer, Benjamin N

McAninch, Jack W

Publication Date

2009-04-01

DOI

10.1016/s0022-5347(09)61069-7

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

AJCC Stage	Mortality difference SCC-UC	With cystectomy	p-value	W/o cystectomy	p-value
I	All-cause MD	-0.03	0.72	0.20	<0.001
	BC-specific MD	-0.07	0.64	0.17	<0.001
II	All-cause MD	0.05	0.32	0.26	<0.001
	BC-specific MD	0.04	0.32	0.24	<0.001
III	All-cause MD	0.09	0.004	0.17	<0.001
	BC-specific MD	0.08	0.008	0.16	<0.001
IV	All-cause MD	0.19	<0.001	0.23	<0.001
	BC-specific MD	0.16	<0.001	0.19	<0.001

Source of Funding: The Ashley Family Foundation

Pediatrics: Trauma, Tumors, Stone Disease & Infection, Imaging (I)

Podium 28

Monday, April 27, 2009

1:00 pm - 3:00 pm

1054

TRAUMATIC DISRUPTION OF THE URETEROPELVIC JUNCTION IN PEDIATRIC PATIENTS

Janelle A Fox*, Ty T Higuchi, Douglas A Husmann, Rochester, MN

INTRODUCTION AND OBJECTIVES: In the pediatric patient population traumatic disruption of the ureteropelvic junction (UPJ) represents a devastating urologic injury. Our experience with this injury is reviewed.

METHODS: Pediatric patients with traumatic disruption of the UPJ presenting from 1987-2007 were identified. Data was collected on presenting symptoms, surgical management, hospital course and outcomes.

RESULTS: A total of 11 patients (12 kidneys) sustained a traumatic disruption of the UPJ with all patients suffering multisystem trauma. Ninety percent (10/11) of patients presented in shock (BP < 90 systolic) and 36% (4/11) presented without hematuria. Two patients (18%) were stabilized and diagnosed with UPJ disruption immediately on presentation. Nine patients (82%) remained hemodynamically unstable and were brought emergently to the operative suite and no indications for urologic exploration were noted at celiotomy. In these 9 patients UPJ disruption was diagnosed within 24 hours from injury in 2/9 (22%), less than or equal to 5 days in 2/9 (22%) patients, and within 6 to 35 days in 5/9 (56%). Five patients (6 kidneys) were diagnosed and repaired within the first 5 days of injury and 5/6 (83%) kidneys were preserved. The one kidney that required nephrectomy had 2 failed repairs. When diagnosis occurred after 5 days, patients were temporized with placement of a percutaneous nephrostomy tube and delayed repair was performed 3 to 12 weeks after injury. Six patients had labile and prolonged hospital courses of which 2/6 (33%) patients underwent primary nephrectomy for management. Three of six patients (50%) underwent an attempted UPJ repair, of which 1/3 (33%) was successful but 2/3 developed lengthy ureteral strictures requiring nephrectomy. One patient of six (17%) had a lengthy ureteral stricture and initial repair was with an ileal ureter. Preservation of renal function only occurred in 2/6 (33%) of the injured kidneys diagnosed and treated 6 or more days post injury.

CONCLUSIONS: Traumatic disruption of the ureteropelvic junction occurs in blunt trauma, and is a devastating injury almost invariably occurring in the presence of multisystem trauma. Repair is enhanced with early diagnosis. When diagnosed in a delayed fashion, successful repair is greatly impacted by the presence of multisystem trauma and the sequelae of prolonged hospitalization.

Source of Funding: None

1055

PEDIATRIC URETHRAL TRAUMA: EXPERIENCE AND OUTCOMES

Bryan B. Voelzke*, Seattle, WA; Benjamin N Breyer, Jack W. McAninch, San Francisco, CA

INTRODUCTION AND OBJECTIVES: To analyze our experience and report outcomes after delayed repair of pediatric urethral trauma.

METHODS: From 1978 to 2007, 27 boys < 18 years old (mean age 15.0) presented for delayed repair of urethral stricture after blunt trauma. Success was defined as resolution of stricture disease after the first attempt at definitive repair. Clinical history, voiding cystogram, and pressure/flow studies were utilized during the post-operative period for discovery of stricture recurrence.

RESULTS: There were eight anterior (8 bulbar/straddle injury) and nineteen posterior urethral strictures that presented in a delayed fashion. All posterior urethral strictures had an initial suprapubic tube placed at the time of initial injury. All posterior urethral injuries had associated injuries, while only one anterior urethral injury had an associated injury. Mean follow-up of our cohort after definitive repair was 1.76 years (median 0.85 years). Anastomotic (23) or buccal mucosa onlay graft (3) were the two major surgical techniques, with urethral dilation performed in one patient with a mild posterior urethral stricture. All procedures were done as a single stage. Partial pubectomy (5/18) was utilized in select patients with posterior urethral strictures. Outcomes are detailed in the following table.

Outcome after anterior & posterior urethroplasty

	NUMBER	SUCCESS (%)
ANTERIOR/BULBAR		
Anastomotic	5	4 (80%)
Buccal Graft	3	3 (100)
POSTERIOR		
Anastomotic	18	16 (88.9)
Urethral Dilation	1	1 (100)

Overall success for anterior stricture disease was 88.9% and for posterior stricture disease was 89.5%. The one anastomotic failure in the anterior cohort occurred at 14.5 months, while the two anastomotic failures in the posterior cohort occurred at 4.5 and 9 months. All three initial failures responded favorably to internal urethrotomy; however, one failed anterior repair and one of the two failed posterior repairs required two internal urethrotomy operations for success. No secondary urethroplasty operations were required and ultimately all patients were voiding per urethra. No patients required adjuvant incontinence surgery.

CONCLUSIONS: Delayed, definitive repair of pediatric urethral trauma by perineal urethroplasty has a high success rate. Surgical failures, although rare, respond favorably to internal urethrotomy.

Source of Funding: None

1056

THE ANTIBACTERIAL ACTIVITY OF TRIMETHOPRIM IS NOT INCREASED BY THE ADDITION OF SULFAMETHOXAZOLE: A PROSPECTIVE MULTI-CENTER IN-VITRO EVALUATION.

Hiep T. Nguyen*, Boston, MA; Richard S. Hurwitz, Los Angeles, CA; William R. DeFoor, Eugene Minevich, Cincinnati, OH; Susan M. Novak, Los Angeles, CA; Joel E. Mortensen, Cincinnati, OH; Jack S Elder, Detroit, MI

INTRODUCTION AND OBJECTIVES: The combination of sulfamethoxazole (SMX)/ trimethoprim (TMP) is the most common antibiotic used in the treatment of acute simple urinary tract infection (UTI) in children. In addition, it is frequently used as prophylaxis in pediatric urological conditions such as vesicoureteral reflux, ureterovesical junction obstruction and recurrent UTIs. The rationale for using SMX and TMP in combination is that they are thought to act synergistically to increase antibacterial activity. However, approximately 3% of patients develop an allergic reaction to SMX, some with even more serious reactions such