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delays in presenting to the hospital by either the patient or parent. Evidence of a weekend effect was found in the adult population. Patients and parents should continue to be educated on the symptoms of testicular torsion and be encouraged to always seek immediate medical attention to improve the chances for testicular salvage.

potential risk factors for penile necrosis were identified and the type and outcomes of reconstruction summarized. Functional outcomes were assessed by non-validated questionnaire.

RESULTS: Thirteen patients with a median age of 57 years (range 27-68 years) required phalloplasty following penile necrosis with no incidence of flap loss. Reasons for erectile dysfunction were diabetes (37.5%), Peyronie's disease (31%) and pelvic trauma (25%). The most common identifiable risk factors was diabetes (60%), followed by smoking (53%), adjunctive procedures like sliding technique or grafting (40%), revision surgery (27%) and infection with delayed explantation (27%). All patients had more than one risk factor for penile necrosis. Penile reconstruction was achieved with the radial artery forearm free flap (62%) and the anterolateral thigh flap (38%). All flaps were designed with an integrated urethra requiring anastomotic urethroplasty. Urethral complications occurred in 46.2% of men (fistulae and strictures) requiring surgical repair (Clavien 3b) while 2 had partial skin graft loss from the donor arm that improved with dressings and antibiotics (Clavien 2). Following phalloplasty, all responders had sensation (46% could orgasm with the neophallus) and 86% were able to void while standing. Most men were satisfied with the esthetic outcome (92%). The questionnaire response rate was 67%.

CONCLUSIONS: Penile necrosis following penile prosthesis insertion is rare and occurs in the presence of risk factors, particularly diabetes and smoking. Penile prosthesis surgery should be considered carefully in this cohort of patients especially for revision surgery or where adjunctive procedures are planned. Infection requires immediate explant of the device. Phalloplasty has good surgical and functional outcomes should reconstruction be required although there is a significant risk of surgical complications.

Source of Funding: Not applicable

**MP02-06
FACTORS ASSOCIATED WITH INTERVENTIONS FOR RENAL TRAUMA**

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INTRODUCTION AND OBJECTIVE: More conservative approaches have been utilized for renal trauma management over the last decade. However, certain clinical scenarios warrant further intervention. We sought to determine factors associated with interventions for renal trauma management using contemporary real-world data.

METHODS: The National Trauma Data Bank (NTDB) was queried for renal trauma with an American Association for the Surgery of Trauma (AAST) grade for patients ≥18 years old. Patients without AAST grade or with no sign of life were excluded. A logistics regression model was used to determine factors associated with intervention, including nephrectomy, angioembolization, and renorrhaphy. Models were adjusted for patient, hospital, and clinical factors.

RESULTS: Our cohort was comprised of 49,884 patients with renal trauma, of which 3,366 (6.8%), 995 (1.9%), and 691 (1.4%) underwent nephrectomy, renorrhaphy, and angioembolization, respectively. Among patients receiving a nephrectomy, patients were more likely to receive a transfusion (OR 3.8, p<0.001), have a penetrating trauma (OR 6.7, p<0.001), have a grade 4 (OR 7.9, p<0.001) or 5 renal trauma (OR 44.7, p<0.001). Patients who had renorrhaphy were more likely to receive a transfusion (OR 1.7, p<0.001) or have a penetrating trauma (OR 44.0, p<0.001). Patients who underwent angioembolization were less likely to be female (OR 0.78, p<0.05), Black (OR 0.71, p<0.01), or have a penetrating trauma (OR 0.31, p<0.001), and were more likely to receive a transfusion (OR 44.8, p<0.001) or have a grade 4 (OR 3.8, p<0.001) or 5 renal trauma (OR 4.2, p<0.001). We observed a complex association between age and probability of nephrectomy. In the unadjusted analysis, there was a peak in nephrectomy for young adults 30-40 years old (Figure 1A). However results of the multivariate model revealed an alternate association where the adjusted risk of nephrectomy was approximately linear and progressively increased with age (Figure 1B).

Table 1. Weekend Effect on Surgical Outcomes For the Management of Testicular Torsion in Pediatric and Adult Populations			
A. Pediatric (≤16 years old) Population			
	Weekday (WD)	Weekend (WE)	p
Age			
Mean Age - years (std)	10.6 (5.2)	11.9 (4.2)	0.002*
Orchiopexy vs. Orchiectomy Rate			
Total Procedures	600	207	
Orchiopexy Rate - N (%)	560 (93.3)	183 (88.4)	0.024*
Orchiectomy Rate - N (%)	40 (6.7)	24 (11.6)	
Bilateral vs. Unilateral Orchiopexy Rate			
Total Orchiopexy	560	183	0.040*
Bilateral - N (%)	351 (62.7)	130 (71.0)	
Unilateral - N (%)	209 (37.3)	53 (29.0)	
Hospital Course			
Operative Time - min (std)	105.68 (49.98)	108.12 (59.21)	0.724
Length of Stay - days (std)	0.27 (1.04)	0.45 (1.06)	0.037*
Total Hospital Cost - \$ (std)	12,460 (18,176)	18,257 (17,194)	0.016*
Prior Torsion Evaluations - N (%)	31 (5.2)	7 (3.4)	0.296
B. Adult (≥17 years old) Population			
	Weekday (WD)	Weekend (WE)	p
Age			
Mean Age - years (std)	27.0 (13.0)	26.7 (12.1)	0.798
Orchiopexy vs. Orchiectomy Rate			
Total Procedures	464	174	0.102
Orchiopexy Rate - N (%)	414 (89.2)	147 (84.5)	
Orchiectomy Rate - N (%)	50 (10.8)	27 (15.5)	
Bilateral vs. Unilateral Orchiopexy Rate			
Total Orchiopexy	414	147	0.372
Bilateral - N (%)	288 (69.6)	108 (73.5)	
Unilateral - N (%)	126 (30.4)	39 (26.5)	
Hospital Course			
Operative Time - min (std)	111.88 (69.32)	103.38 (48.18)	0.392
Length of Stay - days (std)	0.51 (1.56)	0.57 (1.08)	0.619
Total Hospital Cost - \$ (std)	20,459 (85,708)	17,744 (12,551)	0.678
Prior Torsion Evaluations - N (%)	25 (5.4)	10 (5.7)	0.520

Table 1: Evaluation of differences in age, orchiectomy vs. orchiopexy rate, bilateral vs. unilateral orchiopexy rate, operative time, length of stay, total hospital cost, and torsion evaluations within 7 days prior to surgery between weekday* and weekend** admissions for A: pediatric (≤16 years old) and B: adult (≥17 years old) populations presenting for surgical management of testicular torsion. P-values derived from Independent T-Test and Chi Squared Test with a significance of p<0.05 (bolded and * for reference).

*Weekday was classified as starting on Monday at 5am and ending on Friday at 7:59pm.
**Weekend was classified as starting on Friday at 8pm and ending on Monday at 4:59am

Source of Funding: NA

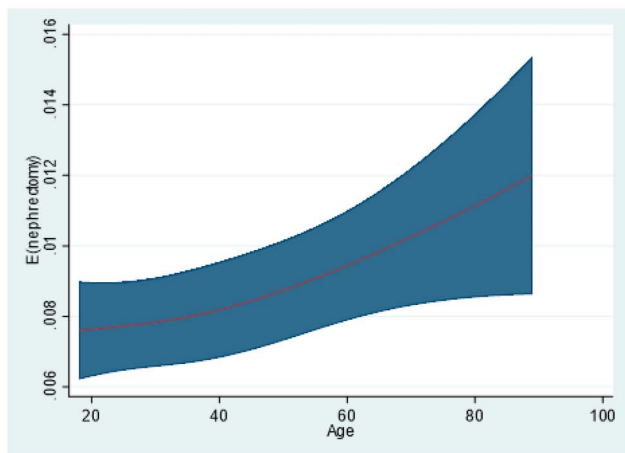
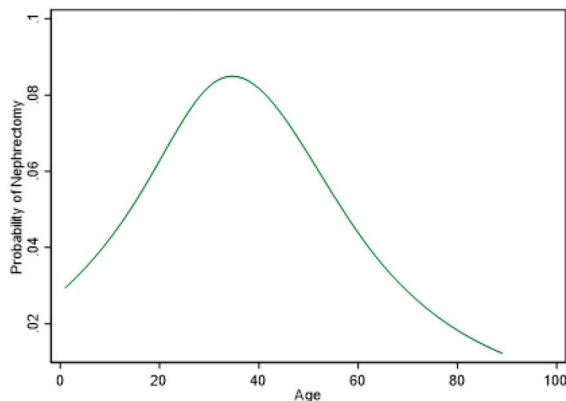
**MP02-05
SURGICAL AND PATIENT REPORTED OUTCOMES FOLLOWING PHALLOPLASTY FOR PENILE GANGRENE**

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INTRODUCTION AND OBJECTIVE: The most catastrophic complication of penile implant surgery results in either total/partial loss of the penis to such an extent that salvage penile reconstruction or phalloplasty is required. Penile gangrene (or necrosis) is rare and is associated with several patient factors (smoking, diabetes) and surgical factors (sliding technique, revision or a subcoronal incision). Irreversible ischemia with tissue loss will ensue if the prosthesis is not removed immediately. Nevertheless, subsequent corporal fibrosis and penile length loss may preclude an adequate functional penile length. In this situation, total penile reconstruction would be the only viable option to restore the ability for sexual intercourse and to void while standing. The aim of this series is to assess the risk factors that predispose a select group of patients that require phalloplasty following penile gangrene and their surgical and functional outcomes following reconstruction.

METHODS: All patients following phalloplasty for penile necrosis were identified from a comprehensive prospective database.

CONCLUSIONS: Several patient, hospital, and clinical factors are associated with the use of nephrectomy, renorrhaphy, and angioembolization for the management of renal trauma. These data suggest that older age is an independent predictor of nephrectomy, warranting further research and efforts to improve renal salvage in the elderly population.



Source of Funding: None

MP02-07
REVISED PENIS SCORING CRITERIA: A MULTILINGUAL SYSTEMATIC REVIEW OF PENILE AMPUTATION AND REPLANTATION

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INTRODUCTION AND OBJECTIVE: Penile amputation can cause severe physical and psychosocial distress and, if feasible, warrants prompt replantation. Since the advent of microsurgery, its superiority over surgical repair for penile replantation has been presumed. However, this has been difficult to verify given the paucity of penile amputation publications compounded with inconsistent thorough reporting. The purpose of this study was to produce an updated systematic review of penile replantation, substantiated by the largest sample size to date, and to appraise the comparative value of the novel PENIS Score.

METHODS: A systematic review identified 122 microsurgical and 40 surgical cases of penile replantation that qualified for review. The novel PENIS Score, which was modified to increase its utility and reproducibility, stratified penile amputations based on five criteria: position along the shaft, extension through the penis, neurovascular repair, ischemia time/type, and severed edge condition/contamination. Each individual PENIS criteria was then evaluated for association with

short-term postoperative complications as well as erection, urination, and sensation.

RESULTS: The viability of microsurgical and surgical replantation was equivalent at 92% and 94%, respectively. A statistically significant correlation was found between microsurgical repair and the return of sensation, though this did not correlate with nerve repair. While the return of sensation with nerve repair was 51%, comparable to microsurgical replantation without nerve repair at 42%, both were significantly higher than the 14% found in surgical replantation. There was a significant correlation noted between the extension of the amputation and severity of postoperative complications in microsurgical replantations ($\tau = .2649$, $p = .0126$) not observed with surgical replantation. Preservation of a skin bridge was associated with a 40% reduction in severe postoperative complications, regardless of surgical method.

CONCLUSIONS: Microsurgical replantation is superior in the return of sensation, with or without nerve repair. When faced with a situation in which no microsurgical expertise is available, surgical replantation is an appropriate alternative. Implementing the PENIS Score will help guide future case reports and systematic reviews.

PENIS Criteria	Grade				
	1	2	3	4	5
P Position along the shaft	< 2cm distal to the base	> 2cm distal to the base & > 0.5cm proximal to the glans	< 0.5cm proximal to the glans	Total penile amputation including one testis	Total penile amputation including both testes
E Extension through the penis	Past the fascia, but < 50% of the penile diameter, without urethral involvement	> 50% of the penile diameter, without urethral involvement	> 50% of the penile diameter, with incomplete section of the urethra	Partial amputation, with a skin bridge, & complete section of the urethra	Complete amputation
N Neurovascular repair	2+ veins, 2+ arteries, & 1+ nerves	2+ veins & 2+ arteries	2+ veins & 1 artery	1 vein	0 veins
I Ischemia time and type	< 1h warm & < 2h cold	< 1h warm & 2-6h cold	< 1h warm & > 6h cold	1-2h warm	> 2h warm
S Severed skin edge condition and contamination	Smooth edge requiring only irrigation	Jagged edge requiring only irrigation	Smooth edge +/- contamination requiring minor debridement	Jagged edge +/- contamination requiring minor debridement	Tissue damage requiring extensive debridement

Note: PENIS scores are reported as P-P, E-E, N-N, I-I, S-S, with a superscript S for self-inflicted and E for external. Subscript numbers distinguish "Extension" and "Severed edge" scores from Erection and Sensation scores.

Source of Funding: None

MP02-08
CATHETER ASSOCIATED MUCOSAL PRESSURE INJURIES (CAMPI): A NOVEL STUDY DEFINING THE IMPACT OF LONG TERM URETHRAL CATHETERS

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INTRODUCTION AND OBJECTIVE: Indwelling urinary catheters (IDC) are common in surgical practice. Given their widespread use, it is tempting to dismiss IDCs as benign drainage tubes. However, a significant complication is erosion of the urethra and surrounding soft tissues resulting in a pressure injury. We coined the term Catheter-Associated Mucosal Pressure Injury (CAMPI) for this form of iatrogenic hypospadias. Active treatment for CAMPI can be invasive with significant side effect profiles, emphasizing the importance of prevention in these patients. To date, there has been little research into CAMPI. Existing publications are either isolated case reports or small case series. This study explored the prevalence and risk factors of CAMPI in adults with long-term IDCs in regional Australia.

METHODS: A multi-centre cross-sectional study was undertaken at two large regional hospitals. The cohort was comprised of 200 adults with an IDC in-situ for >4 weeks between January 2019 to June 2021. Data was collected via a voluntary questionnaire and review of medical records. A novel grading system based on existing hypospadias classification was developed (Image 1).

RESULTS: Overall prevalence of CAMPI was 9% (17/200). The mean IDC duration in patients with CAMPI was 39 weeks (9.7 months). The shortest time between IDC insertion and CAMPI detection was only 2 weeks. Prevalence was higher in males (16/169, 10%) compared to females (1/31, 3%). In males, the grades of CAMPI were meatal (7/17, 41%), glanular (3/17, 18%), coronal (4/17, 23%), subcoronal (1/17, 6%), distal penile shaft (1/17, 6%) and mid-penile shaft (1/17, 6%). The female case involved erosion of the urethral orifice during a long hospital admission. Over two-thirds of adults with a CAMPI had an IDC >16Fr (13/18, 72%). Latex IDCs were more common than