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MP25-09 GENITAL BURNS IN THE UNITED STATES: DISPROPORTIONATE PREVALENCE IN THE PEDIATRIC POPULATION

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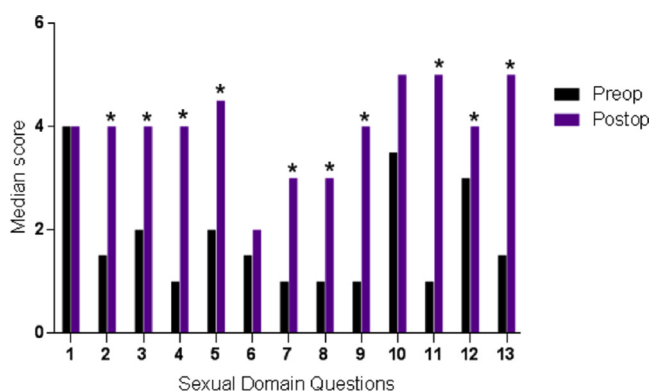
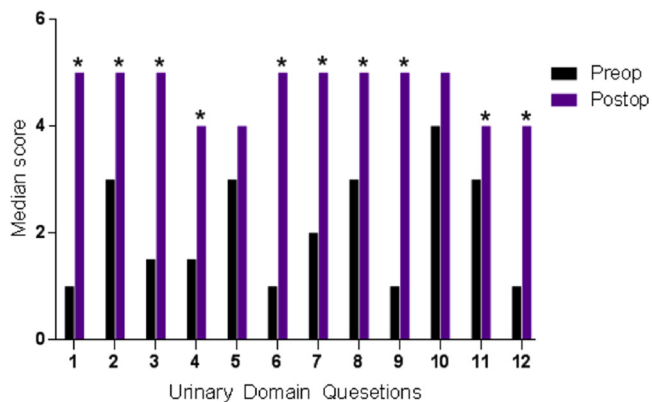
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questionnaire. Further studies with dedicated questionnaires are needed.



Source of Funding: None

MP25-08
EFFECTS OF HORMONE THERAPY ON SPERMATOGENESIS IN MALE-TO-FEMALE TRANSGENDER PATIENTS

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INTRODUCTION AND OBJECTIVES: Little is known about fertility preservation in transgender women who have been on long-term hormone therapy. Estrogen is thought to lead invariably to azoospermia, however data are largely anecdotal or come from small series. Many transgender women have little to no ejaculate, thus semen analysis is not a viable measure of sperm production. Here we present a histologic analysis of spermatogenesis in a large series of transgender women undergoing orchiectomy. We aim to characterize spermatogenesis in the estrogenized patient.

METHODS: Subjects (n=90) were transgender women who underwent bilateral orchiectomy as part of sex reassignment surgery at a single institution between May 2015 and January 2017. All were on long term (> one year) cross-sex hormonal therapy prior to orchiectomy. Patient data were obtained via chart review. Histologic analysis was performed by a single pathology resident under the supervision of a genitourinary pathologist. Grading was based on modified Koni criteria, which derive from the histologic analysis of spermatogenesis in undescended testicles removed after puberty. Primary outcomes included the presence of germ cells and the presence of elongated spermatids (representing intact spermatogenesis). Intact spermatogenesis was quantified by counting the number of seminiferous tubules with elongated spermatids per 50 tubules.

RESULTS: There were 142 pathologic specimens available for analysis. Germ cells were present in 112 out of 142 (78%) testicles. Elongated spermatids were present in 53 (37%) testicles. Among these, the elongated spermatids were found in 4% to 100% of seminiferous tubules (mean 45%, SD 35%). Within subjects, histologic correlation between left and right specimens was excellent. There was no correlation between subject age and preservation of elongated spermatids (Pearson's r=0.08). Data on specific hormone regimens was sparse and highly variable and could not be correlated with the histologic findings.

CONCLUSIONS: Spermatogenesis is frequently preserved even in the long-term estrogenized patient, however histology varies widely. While these findings should lend optimism to the pursuit of fertility preservation in transgender women, future study is needed to characterize factors associated with preserved spermatogenesis, reversibility of spermatogenic suppression, and whether the extant spermatids are viable for use in assisted reproductive technologies.

Source of Funding: None

MP25-09
GENITAL BURNS IN THE UNITED STATES: DISPROPORTIONATE PREVALENCE IN THE PEDIATRIC POPULATION

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INTRODUCTION AND OBJECTIVES: To describe the epidemiology of genital burns (GB) in the United States and investigate the underlying etiology and causative agents.

METHODS: The National Electronic Injury Surveillance System database was queried for individuals who sustained a GB from 2000-2016. We collected data on age, gender, injury diagnosis, disposition, and causative agents. Multivariate analysis was performed to determine predictors of hospitalization.

RESULTS: A total of 585 raw cases were analyzed to estimate the weighted projections of GBs nationally. We estimate 17,026 (95% CI 16,649 - 17,404) cases of GBs presented to Emergency Departments nationally. GBs occurred more commonly in males than females (12,295 vs 4,731, table 1). The mean age at the time of injury was 26.5 years (SD 21.7, range 1 month - 96 years). The mechanisms of GBs were scalding (57.9%), chemical (22.4%) and thermal (19.7%). The most common causative agents stratified by age are summarized in figure 1. Of the injured patients, 66.5% received outpatient care, 21.7% were transferred to higher-level care and 9.1% were hospitalized. Most burns occurred at home (69.4%). Significant predictors of hospitalization on multivariate analysis were multi-organ burns (OR 4.4), scalding (OR 11.5) and thermal burns (OR 27.9). Children ages 0-2 had the highest prevalence of GBs out of all age groups, and children ages 0-12 comprised 37.1% of the study cohort. For children <5 years of age, a majority of the burns were caused by hot water in the bathroom. Most of these injuries occurred when children or caretakers accidentally turned the hot water on or the cold water off. In age group 6-12, the most common causes of GBs were cooking-related scalds due to hot foods or water.

CONCLUSIONS: Children sustain GBs at a higher rate than adults and many appear to have a preventable mechanism. Improved product design for safety and educating caregivers about potential hazardous situations are needed.

Table 1. Demographics of genital burns throughout the study period from 2000-2016 (total estimated cases=17,026).

Age, mean (sd)		26.5 (21.7)
	Pediatric	6.2 (4.9)
	Adult	41.8 (26.2)
Sex, n (%)		
	Male	12295 (72.2)
	Female	4731 (27.8)
Type of injury, n (%)		
	Scalding	9854 (57.9)
	Chemical	3818 (22.4)
	Thermal	3354 (19.7)
Multiple burn sites, n(%)		
	Genitals only	9413 (55.4)
	Multiple sites	7592 (44.7)
Disposition, n(%)		
	Treated and released	11317 (66.5)
	Treated and transferred	3689 (21.7)
	Hospitalized	1543 (9.1)
	Died	208 (1.2)
	Held for observation	101 (0.6)
	Left against medical advice	104 (0.6)
	Unknown	64 (0.4)
Injury location, n(%)		
	Home	11823 (69.4)
	Unknown	3961 (23.3)
	Other public property	596 (3.5)
	School/daycare	438 (2.6)
	Mobile/manufactured home	15 (0.09)
	Place of recreation/sports	108 (0.6)
	Street/highway	86 (0.5)

Rank	0-1 Years	2-5 years	6-12 years	13-17 Years	18-30 Years	31-45 Years	46-65 Years	66+Years
1	Hot Water (86.8%)	Hot Water (51.8%)	Hot Food (43.8%)	Chemical Cleaners (45.3%)	Hot Water (35.5%)	Hot Water (36.1%)	Hot Water (27.3%)	Hot Beverages (28.4%)
2	Hot Beverages (7.1%)	Chemical Cleaners (15.9%)	Hot Water (19.2%)	Hot Water (17.6%)	Hot Beverages (13.3%)	Hot Beverages (14.2%)	Fire (22.7%)	Fire (25.1%)
3	Chemical Cleaners (6.1%)	Hot Beverages (10.4%)	Hot Beverages (14.1%)	Fireworks (17.1%)	Hot Surfaces (13%)	Fire (10.9%)	Chemical Cleaners (13.1%)	Hot Surfaces (23.9%)
4	N/A	Hot Food (7.09%)	Fire (6.69%)	Fire (9.86%)	Unknown Chemicals (10.8%)	Flammable Chemicals (9.82%)	Hot Beverages (10.3%)	Hot Water (21%)
5	N/A	Hot Surfaces (5.03%)	Flammable Chemicals (5.39%)	Hot Food (2.89%)	Chemical Cleaners (7.63%)	Chemical Cleaners (8.14%)	Hot Food (9.15%)	Chemical Cleaners (1.7%)

Figure 1. Percent of top 5 causative agents associated with genital burn injuries by age range.

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**MP25-10
AN EXAMINATION OF THE MANAGEMENT OF RENAL TRAUMA WITH CONCURRENT SPLENIC INJURY**

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INTRODUCTION AND OBJECTIVES: The kidney is the most commonly injured genitourinary organ during abdominal trauma. As both imaging and minimally invasive surgical techniques have improved, there has been a decrease in the use of predominantly open surgical exploration in favor of observation or minimally invasive treatments. The management of injuries to other solid abdominal organs, such as the spleen has changed similarly. Despite this, there is little

guidance in the literature examining the management of renal injury in the setting of splenic trauma.

METHODS: Our institutional trauma registry was queried to identify all patients with combined spleen and renal trauma during the past five years. We retrospectively collected patient demographics, mechanism of injury, injury severity, concomitant injuries, imaging studies, treatments and associated complications, and whether urologic consultation was requested. The American Association for the Surgery of Trauma (AAST) grading system was used to categorize renal injuries as either low-grade (1-3) or high-grade (4-5). Data was analyzed with a two-sided Fishers exact test with significance set at p=0.05.

RESULTS: 102 patients traumatically sustained concomitant renal and splenic injuries. 12 patients suffered bilateral renal injuries. The mean grade of renal injury using the AAST classification was 2.75 [1.60-3.90]. 84 (73.6%) injuries were classified as low-grade and 30 (26.4%) were classified as high-grade. 94 injuries (82.4%) underwent observation alone, 15 injuries (13.2%) required a nephrectomy, and five injuries (4.4%) were treated with renorrhaphy, ureteral stent, nephrostomy tube, or embolization. When stratified by grade of injury, a significantly larger percentage of patients with high-grade injuries underwent a nephrectomy as compared to those who suffered low-grade injuries (43.3% versus 2.4%; p<0.05). Overall 34 patients underwent a splenectomy. A nephrectomy was performed in 26.5% of patients who underwent splenectomy as compared to 8.8% who did not undergo splenectomy (p < 0.05; OR 3.7, CI 95%).

CONCLUSIONS: A majority of patients who suffered concurrent renal and splenic trauma were treated with observation alone. However, individuals who suffered high-grade renal injuries with concurrent splenic trauma were more likely to undergo a nephrectomy as compared to those who suffered low-grade injuries. In addition, patients who underwent a splenectomy were over three times more likely to undergo a concurrent nephrectomy as compared to patients who did not require splenectomy.

Source of Funding: None

**MP25-11
REDO PENILE HYPOSPADIAS REPAIR WITH TUBULARIZED INCISED PLATE URETHROPLASTY USING BUCCAL MUCOSA GRAFT AND DOUBLE DARTOS FLAP**

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INTRODUCTION AND OBJECTIVES: Treatment of patients with failed hypospadias repairs is a surgical challenge. The aim of this study is to describe the results of redo penile hypospadias repair using the tubularized incised plate urethroplasty (Snodgrass method) with buccal mucosa graft (BMG), supported by double dartos flap as a second layer.

METHODS: In a prospective cohort study 25 patients with a history of previous failed hypospadias repair underwent redo urethroplasty using tubularized incised plate procedure (Snodgrass method) and BMG as the urethral plate, with the addition of double dartos flap for covering the neourethra. Outcomes and complications during the follow up period were recorded.

RESULTS: The mean age of the patients was 8.00 ± 3.49 years (range, 4 to 15 years). The location of the hypospadias was distal penile in 5, mid penile in 8 and proximal penile in 12 cases. In the mean follow-up of 8.45 ± 2.62 months (range, 6 to 12 months) the following minor complications were recorded: 2 subjects developed slight chordee < 30 degrees and 3 had meatal stenosis postoperatively. No urethrocutaneous fistula occurred in our subjects.

CONCLUSIONS: Tubularized incised plate urethroplasty fortified by BMG and double dartos flap is an acceptable method with minor complications in treatment of patients with failed hypospadias repairs.