Unmoderated Poster Sessions: Miscellaneous
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UP-096
A Study on the Interrelashinship Between Calculi,Hormonal Abnormalities and Urinary Tract Infections

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Introduction and Objective: Urolithiasis is a major health problem with its high morbidity,high cost management and a potential for end stage renal disease.Urinary calculi are the third most common affliction of the urinary tract exceeded only by urinary tract infection (UTI) and pathological conditions of the prostate.It has been previously demonstrated a relationship between renal calculi formation and related serum ions like calcium,phosphorous and magnesium.The main objective of the present study is to assess the interelationship between the previous variables and the levels of thyroid (T3,T4,TSH) and parathyroid (PTH) hormones.

Methods: This study was carried out on 150 patients attended Tikrit Teaching Hospital from 2008 to 2009. Stone and serum ions were analyzed utilizing relavent Biolab Company kits (France). Thyroid hormones were determined using ELISA microwellskit (Accuubind,USA). Parathyroid hormone was estimated by active I-PTH ELISA(DSL,USA). Urine cultures were done utilizing cystine-lactose-electrolyte deficient (CLED) medium. Various isolated pathogens were conventionally identified and assessed for antibiotic resistance.

Results: Urine cultures revealed that 42% of the patients had urinary tract infections particularly with *Enterobacteriaceae*. The antibiotics resistance among pathogens tested was varied which high with ampicllin. 68% of the sones tested were calcium oxalate.Infective and noninfective stones were classified. Calcium ion was more elevated in patients examined. Hypothyroidism was prevalent but parathyroid hormone(PTH) was elevated among 14 patients studied.

Conclusion: The frequency of UTI was higher among urolithiasis patients and the common causative agents were Gram negative bacteria. Antibiotic resistance was elevated and variables depending on the antibiotics and pathogens types. Renal stones of calcium origin was predominant. Hormonal abnormalities were seen. 15 patients with hyperthyroidism revealed hypercalcaemia and hypercalcuria.

UP-097
Compliance with Semen Analysis Post-Vasectomy

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Introduction and Objectives: Vasectomy is a common form of birth control for many Canadian couples. Recently, the CUA published guidelines for this procedure including recommendations for post-vasectomy semen analysis. Studies have shown that when an appointment is made for semen analysis (as opposed to giving the specimen containers to the patient at the time of the vasectomy and having him organize the testing himself), that the compliance rates for submitting samples is higher. The purpose of the following study was two-fold. Firstly, to calculate compliance rate and secondly, to determine which 'population' of men is more/less likely to follow-up with semen analysis.

Methods: We retrospectively reviewed 703 consecutive ambulatory clinic vasectomies performed by one urologist at our institution. Standard follow-up consisted of a pre-booked appointment made for 2 months post-vasectomy and for 2 semen analyses at 4 months post-vasectomy. The schedule was discussed with the patient and written instructions were provided at the time of vasectomy.

Results: The average age in our study was 33.5 (5.3) and the martial status was as follows: married = 80.8%, common-law = 12.7%, single/divorced = 6.5%. The mean number of children prior to vasectomy were 2.14 (.90). Of the 703 patients in the study 44.4% did not submit semen samples, and of the men who did submit semen samples 31.1% did not provide the required 2 negative samples for confirmation of a successful vasectomy. The mean time to semen analysis was 4.53 (1.78) months. Complications included: infection = 2%, hematoma = 1.3%, mild tenderness = 2.8%, and spermatogranuloma = 0.6% and all others = 1.6%. No statistically significant difference in compliance was identified between 1) married/common-law vs unmarried men (37.9% vs 43.5% p=0.39) 2) men >30yo vs men < 30yo (37.5% vs 40.7% p=0.38) and 3) those with complications vs those without complications (48.3% vs 37.4% p=0.48).

Conclusion: The number of men not providing a sperm sample after a vasectomy in our study is alarmingly high. Based on our data we were not able to identify a subset of patients with poor compliance rates. This is particularly worrisome, given the small, albeit remote chance of failure and re-canalization after a vasectomy as well as the potential risk of fertility and litigation. We as urologists must carefully review our practices for semen analysis compliance post-vasectomy.

UP-098
Anti-Inflammatory Effects of Fish Oil (Omega-3 Fatty Acids) On Normal Human Prostate Epithelium

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Introduction and Objective: Mounting evidence suggests that inflammation is a key causal factor for prostate carcinogenesis and that omega-3 fatty acids and the polyphenol gingerol, active element of the rhizome Gingiber officinalis, exhibit anti-inflammatory effects. We thus sought to define *in vitro* the individual inflammatory response on normal prostate epithelium cells and the anti-inflammatory effect of the micronutrients omega-3 and gingerol.

Methods: Human primary prostatic epithelial cells were derived from 25 cases of radical prostatectomy, cystoprostatectomy or organ donation. Tissues were obtained from needle biopsies in normal areas without cancer of the prostate gland and were cultured in complete KSFM medium. Gas chromatography was used to measure fish oil and cell culture fatty acid content after total lipid extraction.

Induction and Measurement of Inflammation: Cells were pre-treated during 27 hours with the micronutrient, at concentrations previously reported, or its diluting medium control alone. Then inflammation was induced by Poly (I:C) 10 µg/mL for 20 hours. Production of IL-8 was measured using a human IL-8 Elisa Max deluxe set-Biolegend in the cell medium, and was normalized to total DNA, measured using a DRAQ5 LI-COR protocol. Inhibition of the inflammation response to Poly (I:C) was measured relative to the diluting medium control alone.

Results: Pre-treating cells with fish oil significantly (t-test p=0.0008) increased the cell's relative concentration of total omega-3 from 1.73% (SD 0.03%) to 5.36% (SD 0.20%). Induction of inflammation by Poly (I:C) was highly

variable (induction factor mean 19.4, SD 15.7; range 2.1 to 77.9) between patients, and was not related to drug use or medical history. Fish oil inhibited the inflammation induction with some variability at concentrations of 1 nanoL/mL (mean 61; SD 17.54; range 25 to 91). Greater concentration of fish oil (1 mL/mL) produced a virtually complete inhibition of the inflammation induction (mean 95; SD 4.2; range 79 to 99). In contrast, gingerol, even at the highest dose tested of 50 μM, produced a significantly lower (paired *t*-test $p<0.0001$ compared with fish oil) and highly variable inhibition of the inflammation induction (mean 51.8; SD 19.3).
Conclusions: Fish oil appears to strongly inhibit the response to an inflammatory stimulus of normal human prostate epithelium in every patient, in contrast to gingerol. This suggests that a high dietary intake of omega-3 could reduce prostate inflammation and potentially the risk of developing prostate cancer.

UP-100

Vasectomy Reversal Provides Long Term Pain Relief For Men With Post-Vasectomy Pain Syndrome

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Introduction and Objective: Post-vasectomy pain syndome (PVPS) is a very rare but serious complication of vasectomy that can be extremely debilitating for men who experience it. For these men, vasovasostomy (VV) has long been viewed as a first-line surgical option after conservative management has failed. However, there is a paucity of data in the literature defining its therapeutic efficacy. Herein, we aim to better define its role with regards to improvement in pre-operative pain scores and quality of life.
Methods: Three Urologists in Toronto, Ontario performed 149 publically funded VV's for Ontario residents between Jan. 2000 and Sept. 2010. The electronic health records were scanned and 23/149 (15%) of the procedures were performed for PVPS. 13 of these men (who underwent 14 VV's) completed our telephone-conducted questionnaire (response rate = 56%). Patient demographics, pre- and post-operative pain scores and quality of life were assessed retrospectively.
Results: Orchalgia occurred 19±42.5 months post-vasectomy and these men (age 43.8±5.2) suffered in pain for 50.3±34.9 months prior to vasovasostomy. Improvement of pain occurred in 93% (13/14) of cases and 50% were rendered pain free with an average improvement in pain intensity scores of 65% ($p<0.005$). 15% (2/13) had a recurrence of pain to baseline but overall 79% (11/14) had a durable positive response. More severe pain had lower overall improvement scores (r=0.42) and longer duration of pain prior to reversal had higher overall improvements (r=0.32). Quality of life was significantly improved ($p<0.005$) and 93% (13/14) said they would undergo the same operation again.
Conclusions: Vasovasostomy is an effective treatment modality for post-vasectomy pain syndrome, which can achieve robust and durable long-term improvements in pain intensity and quality of life.

UP-101

Interstitial Cystitis: Effects of Age and Gender

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Introduction and Objectives: To determine whether interstitial cystitis/painful bladder syndrome (IC/PBS) patients present differently by age; present differently by gender; or present differently if they satisfy or do not satisfy NIDDK criteria.
Methods: Consecutive IC/PBS subjects (89 men, 387 women) were studied retrospectively. Clinical data were collected prospectively, including voiding characteristics, exam findings, voided volumes, validated instrument scores, and cystoscopy hydrodistension findings. Subjects were divided into cohorts and contrasted: by age quartiles; male versus female; and NIDDK criteria vs non-NIDDK criteria diagnosed subjects. Analysis of variance, paired t-tests, chi-square and Fisher exact tests were used for statistics.
Results: Younger subjects had less nocturia and larger anaesthetic capacities than older subjects, $p<0.05$. Men and women were similar for frequency, nocturia, pain, triggers, voided volumes, glomerulations, and Hunner's ulcers. They differed for irritable bowel syndrome, prior sex abuse, prior urine infection diagnoses, suprapubic tenderness, and anaesthetic capacity, $p<0.05$. Subjects who satisfied NIDDK criteria were older, had more severe symptoms, smaller voided volumes, and smaller anaesthetic capacities than non-NIDDK subjects, $p<0.05$.
Conclusions: IC/PBS presents with worse disease as patients age. Men and women with IC/PBS present similarly. Patients who satisfy NIDDK criteria define a more severely symptomatic subset of IC/PBS patients than those who do not satisfy NIDDK criteria.

UP-102

Incidence and Clinical Characteristics of Male Cancer Survivors Presenting to an Infertility Practice

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Rationale: To our knowledge, there are no reports describing male cancer survivors presenting to an infertility practice. We sought to determine the incidence and clinical characteristics of cancer-survivors among a large cohort of men being evaluated for infertility.
Methods: A retrospective review of the Mount Sinai Hospital's infertility database was conducted from 1995 to 2010. All patients with a self-reported history of neoplasm had their charts reviewed. Clinical data regarding their neoplasm, fertility, sexual function, semen parameters and symptoms of andropause were collected.
Results: We reviewed 2796 patient questionnaires from the Mount Sinai Hospital infertility database. Twenty-four patients (0.9%) had a cancer diagnosis prior to their evaluation for infertility. The mean age of cancer diagnosis was 23.6 years (range 4-50) and age at infertility evaluation was 35.6 (range 17- 55). The prior neoplasms were 0.3% testicular, 0.2% lymphoma, 0.1% leukemia, 0.07% of each colon, thyroid, and sarcoma and 0.04% Wilm's tumour.

Almost all men (96.5%) required treatment for cancer (63% surgery, 67% chemotherapy, 42% radiation, 8% bone marrow transplant). Eleven of 18 men (61%) who completed the Androgen Deficiency in the Aging Male Questionnaire had symptoms of androgen deficiency. One quarter of these were hypoandrogenic (total testosterone ≤ 10 nmol/L) and 5 had testicular volumes below 12cc. All semenalyses were abnormal (50% azoospermic, 30% oligospermic, 10% asthenoteratospermic). Sexual function was preserved in most with a mean Sexual Health Inventory for Men Score of 22 (range 5-25). The management of infertility was surgical in 46%; microTESE (91%), varicocelectomy (9%). Half who underwent a microTESE had active spermatogenesis, the remainder had Sertoli Cell Only pattern. All men who did not have surgery remained infertile at the time of their last follow-up. Only 17% had banked sperm.
Conclusions: It is not uncommon to find a history of neoplasm in men referred to an infertility clinic, where both infertility and hypogonadism are long-term sequelae of cancer treatment. Only a minority had banked sperm with almost half resorting to surgical interventions for infertility. Cancer patients should be counseled regarding the risks of both infertility and hypogonadism and offered to bank sperm where possible.

UP-103

Supplementation of Organ Preservation Solution with Hydrogen Sulphide Improves Graft Function and Survival Following Renal Transplantation after Cold Storage

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Introduction: Organ procurement is associated with significant ischemia and reperfusion injury (IRI) leading to increased rates of delayed sue injury

will be crucial in improving long-term renal graft survival. Hydrogen sulphide (H2S) is a newly discovered, endogenous molecule that has recently been shown to minimize ischemic tissue injury. We aimed to characterize the protective role of H2S in a murine model of renal transplantation (RTx).
Methods: Following bilateral native nephrectomy, Lewis rats underwent RTx with left kidneys obtained from syngeneic donors that were flushed, at the time of procurement, with 25 mL of either cold (4°C) University of Wisconsin (UW, Control) or cold UW + H2S donor molecule (150 μM NaHS) solution and stored for 24 hours at 4°C in 50 mL of the same solution. Following RTx, metabolic cages were used to monitor various parameters of graft function until the time of death or 14 days; Sham operated rats were also followed. Renal grafts were then histologically assessed for cellular injury, apoptosis and markers of inflammation.
Results: H2S treated kidneys showed marked improvement in turgor and color after RTx, compared to Controls. H2S group also recovered rapidly from RTx and demonstrated increased urine output, and survival (Figure 1) versus Control. Supplemental H2S led to a decline in serum creatinine levels towards baseline (Sham) following RTx whereas levels remained high in Controls (Figure 2). Histologically, H2S treated grafts revealed less glomerular/renal tubular injury and apoptosis compared to Control kidneys.
Conclusions: These findings are the first to report that supplemental H2S has a protective role in transplant induced renal IRI and may have significant potential clinical implications.

UP-104

Management of Combined Intraperitoneal and Extraperitoneal Bladder Trauma: A 5-Year Review

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Introduction and Objective: Trauma has become a significant health problem, in part due to high velocity transportation and the use of penetrating weapons. Not only the young, but also the elderly and pregnant women are affected. Associated trauma of pelvis and urinary tract considered as severe trauma, due to prolonged treatment, disability and rehabilitation and also high mortality.
Methods: The records and details of urinary bladder injuries treated between 2001 and 2006 were analyzed for urological and traumatological departments of Republican Research Center for Emergency Medicine of Uzbekistan.
Results: During the 5-year period there were 638 patients with pelvic bone fractures, 8.6% of all trauma cases, 102 (15.9%) were associated with injury of urinary tract and only 44 (43.1%) patients with urinary bladder trauma, 38 men and 6 women. In 4 patients there was simultaneous injury of the urinary bladder and posterior urethra. In outpatient unit 28 (63.6%) patients' revealed early signs of peritonitis, whom subsequently performed diagnostic laparoscopy. The injuries were intraperitoneal in 22 patients (50%), extraperitoneal in 16 (36.4%) and in 6 (13.6%) patients combined. Diagnosis was by abdominal ultrasonography in 38 (86.4%), IVU in 14 (31.8%), cystography in 17 (38.6%) and CT in 9 (20.4%). The interval between trauma and diagnosis was 0.5–108 h. During surgery a monolayer suture of the bladder wall was used in 6 patients (13.6%), a two-layered suture in 38 (86.4%), perivesical drainage in 41 (93.2%) and the peritoneal cavity inspected in 28 (63.6%). The mean duration of treatment was 12.6 (7–42) days; two patients died after the treatment failed.
Conclusions: Although ultrasonography was the commonest and cheapest diagnostic method, cystography was the method of choice. CT was used if there was a suspicion of multiple organ trauma. We recommend ascending cystography with at least two views after filling the bladder with <300 mL of contrast medium, with an additional film after emptying. In patients with pelvic bone trauma it is reasonable to use CT with virtual analysis, before surgery. And also we suggest repair using a two-layered suture of the bladder wall, with perivesical drainage.

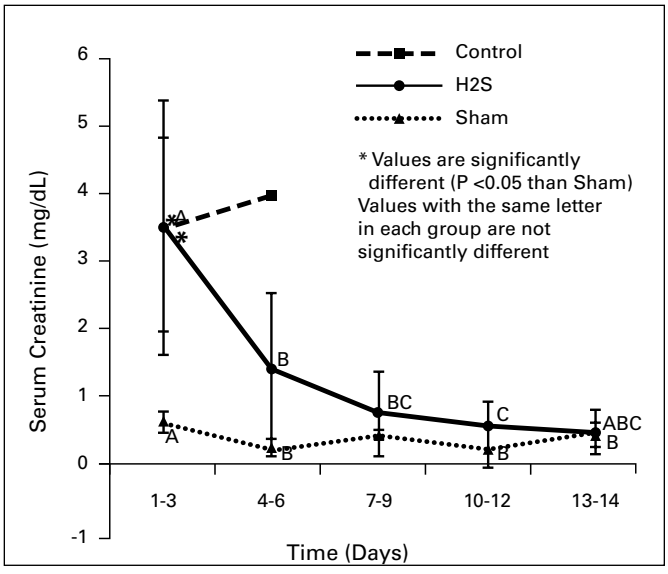

Fig. 1. UP-103

UP-105

The Effects of Carbon Monoxide Releasing Molecule-3 and Hydrogen Sulphide on Renal Protection During Pulsatile Perfusion

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Introduction and Objective: Studies on small animal models have shown that through their vasodilatory and antiapoptotic properties, carbon monoxide releasing molecules (CORM)-3 and hydrogen sulphide (H2S) can protect kidneys during prolonged periods of cold storage. This study expands on previous work by assessing the effect of CORM-3 and H2S on pump resistance, cell injury, and apoptosis in the cold perfused porcine kidney.
Methods: Ten kidneys were procured from domestic farm pigs, flushed with heparinized solution after 5 minutes of warm ischemia, and placed on the Lifeport perfusion pump at 4°C for 48 hours. The kidneys were randomly assigned to one of four treatment groups: control cold storage (n=2), control cold pulsatile perfusion (n=2), 100 μM CORM-3 pulsatile perfusion (n=4), or 200 μM H2S pulsatile perfusion (n=2). Perfusion flow and resistance were recorded, and the kidneys were stained for TUNEL and histology was assessed.
Results: Compared with control kidneys, pulsatile perfusion with H2S showed decreased TUNEL$^+$ cells (4.5/10 hpf) versus control kidneys (10.5/10 hpf) (p=0.007), and perfusion with CORM-3 showed a decrease in glomerular necrosis (Figure 1). Mean vascular resistance was lower in both CORM-3 and H2S kidneys versus control kidneys (p=0.0003 and p=0.0008). Accordingly, mean flow was higher in the H2S group versus control (p=0.009) at 1 hr. Even by 47 hr, perfusion parameters were superior in H2S-treated kidneys (p=0.003) (Figure 2).
Conclusions: This preclinical pilot study shows that both CORM-3 and H2S play a role in decreasing cell injury and improving perfusion parameters in kidneys undergoing cold pulsatile perfusion. This provides rationale to assess both agents in combination and to assess the ability of these small molecules to protect the graft against storage injury in porcine transplant models.

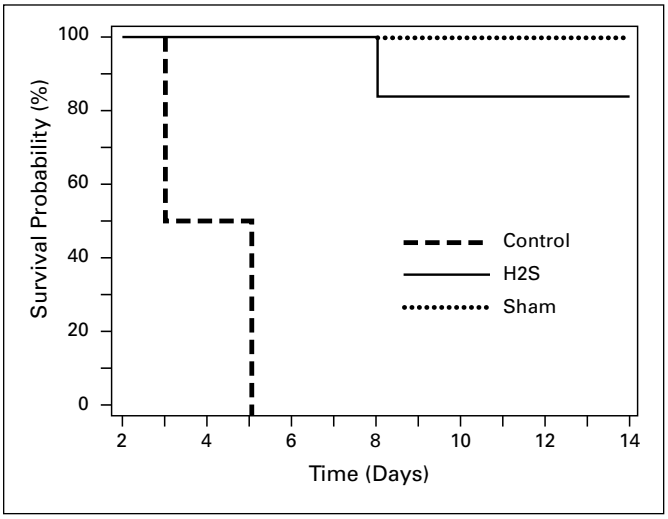

Fig. 1. Effect of H_2S on survival. UP-105

UP-106

Metastatic Survey for Clinically Low-Risk Prostate Cancer: Is There an Indication?

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Introduction and Objectives: Secondary malignancies are possible from diagnostic ionizing radiation delivered by computerized tomography (CT). Employment of CT, nuclear bone scan (NBS) and/or magnetic resonance imaging (MRI) can subject patients to such risk and/or strains the health-care system. The use of diagnostic imaging for patients with clinically low-risk prostate cancer referred to a major Midwest medical center for robot-assisted laparoscopic prostatectomy (RALP) is examined.

Methods: Retrospective review of consecutive patients who underwent RALP at our institution was performed. Those having low-risk biopsy-proven prostate cancer (PSA <10, Gleason Score ≤6 and clinical stage T1 or T2a) were included for analysis. Whether these patients had CT, NBS and/or MRI prior to their retrieval, their results and the final pathology were recorded.

Results: 140/260 (53.8%) patients undergoing RALP were identified as having low-risk prostate cancer. 30/125 (24.0%) underwent initial diagnostic imaging (19 both CT and NBS, 4 NBS only, 6 CT only and 1 NBS and MRI). Of the low-risk patients, 17/140 (12.1) had high-volume disease (greater than 50% positive biopsy cores). 14/17 (82.4%) of these men did not receive preoperative imaging. Comparing patients with low and high-volume disease, there was no significant difference in patient selection for obtaining preoperative imaging (p=0.788). Radiographic studies of all 30 patients were negative for metastatic disease. On final pathology, there were 2 (1.4%) pTx, 33 (23.6%) pT2a, 4 (2.9%) pT2b, 92 (65.7%) pT2c, 8 (5.7%) pT3a and 1 (0.7%) pT3c disease. At a mean follow-up of 14.7 ±11.1 months, no PSA recurrence has occurred.

Conclusions: Performance of preoperative diagnostic imaging appears to not be necessary in patients with clinical low-risk prostate cancer, as its results rarely alter one's treatment plan. In turn, it may increase the patient's risk for developing secondary malignancies and burden health-care resources.

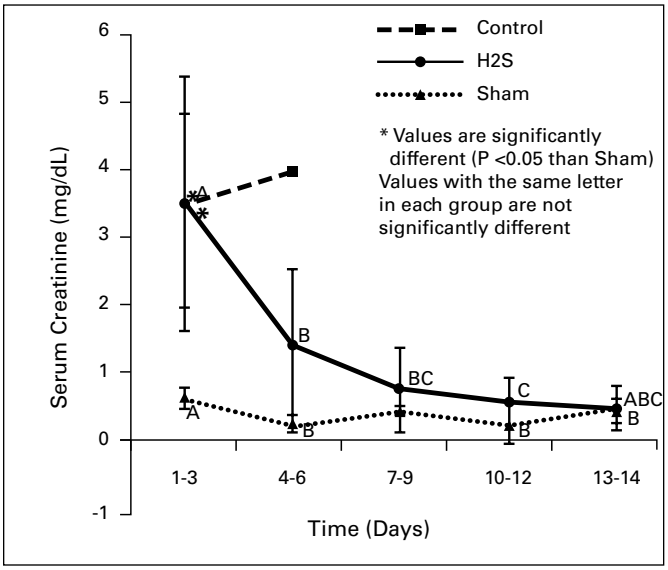

Fig. 2. Effect of H_2S on serum creatinine. UP-105