Moderated Poster Session V: Renal Transplant, Laparoscopy & Female Urology
Friday, October 28, 2011, 3:00 pm – 4:30 pm

P70
Hydrogen Sulphide Improves Real-time Renal Microvascular Flow and Attenuates Renal Injury Following Prolonged Warm Ischemia Reperfusion Injury

Melanie Kalbfleisch[1], *Ian Lobb*[1], *Amy Mok*[1], *Aurelia Bihari*[2], *Abdel-Rahman Lawendy*[3], *Alp Sener*[3].
[1]University of Western Ontario, London, ON, Canada, [2]Lawson Health Research Institute, London, ON, Canada, [3]London Health Sciences Center, London, ON, Canada.

Background: Ischemia-reperfusion injury (IRI) is inevitable in organ transplantation. To compensate for the shortfall in available donor kidneys, organs from donors after cardiac death (DCD) are more widely utilized. Unfortunately, DCD kidneys are more sensitive to IRI and suffer increased delayed graft function and rejection with decreased graft survival. Modifications to existing graft perfusate/storage solutions may potentially benefit DCD graft outcomes. Hydrogen sulphide (H2S) is a novel endogenous molecule which has recently gained notoriety for its protective effects against hypoxia induced injury; however, its role in warm renal IRI has not yet been fully elucidated. We aimed to determine if exogenous H2S would affect renal and hepatic vascular flow patterns (intravital microscopy), as well as markers of organ function, inflammation and apoptosis in a rat model of warm renal IRI.

Methods: Male Lewis rats were subjected to right nephrectomy followed by 1h of left renal ischemia and 2h of reperfusion while the peritoneum was perfused with 4°C PBS (IRI, n=5) or 150 μmol/L of NaHS (IRI + H2S, n=6) and compared to Sham (n=6) animals. After reperfusion, the kidney or liver was exteriorized for intravital microscopy video recording to assess renal vascular and hepatic sinusoidal microcirculation. Blood was collected for serum AST, ALT and creatinine. Kidneys were histologically scored for apoptosis and homogenates were tested for markers of inflammation and apoptosis by real time RT-PCR.

Results: Kidneys subjected to IRI showed a decrease in the proportion of perfused peritubular capillaries (PC) and an increase in capillaries devoid of blood flow, which were significantly improved with supplemental H2S, this pattern was also visualized in liver sinusoids. IRI showed marked elevation in creatinine, AST and ALT, which were tapered with the administration of H2S. IRI led to increased expression of inflammatory markers (IL-2 and IFN-**γ**) and reduced mRNA levels of genes that encode pro-survival proteins (BCL-2, ERK-1 and ERK-2) which were all attenuated in the IRI+H2S group. Histological analysis revealed decreased renal tubular apoptosis in the IRI+H2S compared to IRI animals.

Conclusions: Our findings support the protective role of supplemental H2S in warm IRI injury and suggest that this novel mediator may have potentially clinical applicability in DCD models of renal transplantation as well as in nephron-sparing surgery.

P71
Exogenous Hydrogen Sulphide Supplementation Improves Graft Function and Survival Following Syngeneic Renal Transplantation after Prolonged Cold Storage

Ian Lobb, *Amy Mok, Zhu Lan, Hao Wang, Alp Sener*.
University of Western Ontario, London, ON, Canada.

Background: Organ procurement is associated with significant ischemia and reperfusion injury (IRI) leading to increased rates of delayed graft function, acute rejection and early graft loss. Developing novel techniques to attenuate IRI-induced graft tissue injury will be crucial in improving long-term renal graft survival. Hydrogen sulphide (H_2S) is a newly discovered, endogenous molecule that has recently been shown to minimize ischemic tissue injury. We aimed to characterize the protective role of H_2S 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 + H_2S 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 and apoptosis.

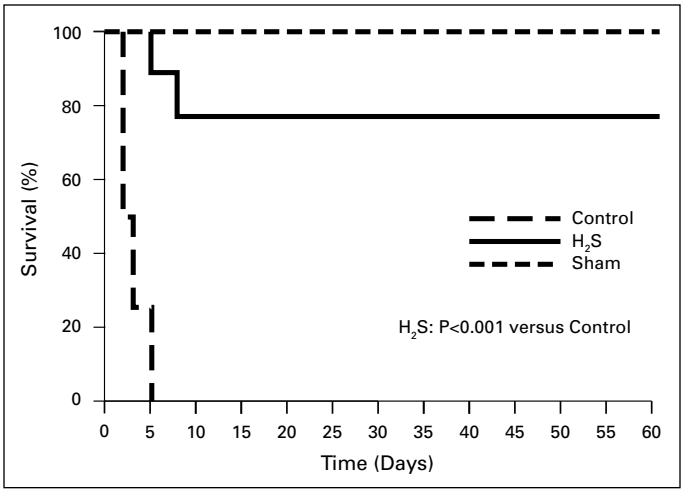

Fig. 1. P71. Effect of H_2S treatment on survival after renal transplant

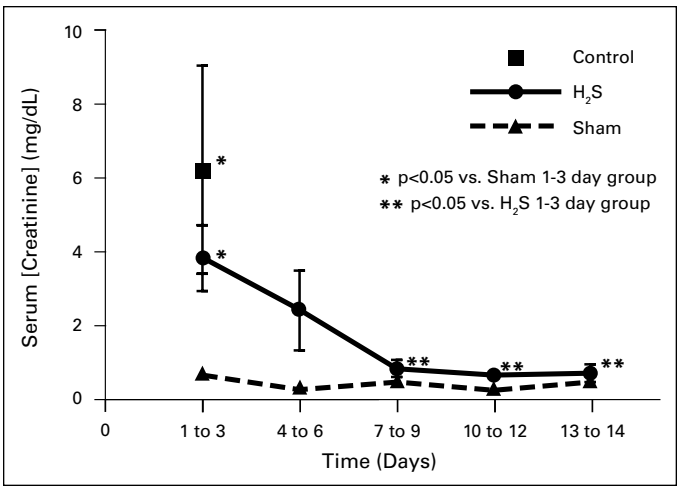

Fig. 2. P71. Effect of H_2S on serum creatinine levels after renal transplant.

Results: H_2S treated kidneys showed marked improvement in turgor and color after RTx, compared to Controls. H_2S group also recovered rapidly from RTx and demonstrated significantly increased survival rates (Fig. 1) versus Control. While Control animals did not produce any urine, H_2S treated animals experienced early diuresis ($p<0.05$) after RTx compared to Sham. Supplemental H_2S led to a decline in serum creatinine levels towards baseline (Sham) following RTx, whereas levels remained high in Controls (Fig. 2). Histologically, H_2S treated grafts revealed less glomerular/renal tubular injury and apoptosis compared to Control kidneys.
Conclusions: These findings are the first to report that supplemental H_2S has a protective role in transplant induced renal IRI and may have significant potential implications for improving organ storage techniques.

P72

Preliminary Assessment of a Renal Tumor Materials Model

Alfonso Fernandez[1], *Elvis Chen*[1], *John Moore*[1], *Terry Peters*[1], *Petar Erdeljan,* [1], *Carling Cheung*[1], *Andrew Fuller*[1], ***Stephen E. Pautler***[1], *Elspeth M. McDougall*.[2]
[1]The University of Western Ontario, London, ON, Canada, [2]Department of Urology, University of California, Irvine, CA, USA.
Introduction: Advances in minimally invasive urology is leading to ablative tissue technologies which encompass complex surgical procedures that require percutaneous imaging and needle placement for biopsy and ablation. To date there has been no realistic tumor model on which to practice these skills before advancing to higher fidelity training or clinical practice.
Objective: To evaluate a unique materials model for laparoscopic guided cryotherapy or radiofrequency tissue ablation of tumors of the kidney through expert surgeon assessment.
Methods: During the inaugural American Urological Association 2010 Tissue Ablative course content validity testing of a renal tumor model was undertaken. Five nationally recognized expert faculty in cryotherapy and radio frequency ablation (RFA) techniques for renal tumor disease performed laparoscopic ultrasound examination of the tumor model. They then performed ultrasound guided placement and activation of the treatment probe into the tumor of the model. Following this they completed a questionnaire and rated the quality of the renal tumor model on a 5 point Likert scale as to its appropriateness as a teaching tool.
Results: All of the subjects assigned a score of 5 out of 5 on the Likert scale regarding the ability to identify the tumor with ultrasound, were able to deploy the ablative probe into the model under ultrasonic (US) guidance and would recommend the use of this teaching model to residents or fellows. The expert faculty felt that this tumor model was appropriate for teaching laparoscopic US imaging of a renal tumor during ablative treatment procedures, teaching and practicing laparoscopic US guided cryotherapy and teaching and practicing laparoscopic U/S guided RFA.
Conclusion: We have developed a unique model that simulates small kidney tumors that can be employed for training surgeons in ablative techniques.

P73

Incisional Hernia Following Robot Assisted Radical Prostatectomy – Incidence and Predisposing Factors in a Prospective Cohort of 250 Cases

Andrew Fuller, *Alfonso Fernandez, tephen E. Pautler*.
The University of Western Ontario, London, ON, Canada.
Background: Robot Assisted Radical Prostatectomy (RARP) has emerged in the last decade as an alternative to Open Radical Prostatectomy (ORP) for men with localized prostate cancer. The incidence of incisional hernia following RARP has not previously been described. We report our prospective data in an attempt to identify factors which may predispose to this important, yet under reported complication.
Methods: A consecutive cohort of 250 patients undergoing RARP was analysed with institutional ethics approval. RARP was performed by a single surgeon (SP). Our database captured pre-operative, intra-operative and post-operative data. Patients were assessed post-operatively for incisional hernia according to a standardized protocol which incorporated history and physical examination. The information contained in our prospectively collected RARP database was utilized to assess the incidence and predisposing factors for incisional hernia post transperitoneal RARP.
Results: Analysis of our database of 250 patients with a mean follow up of 35 months revealed 12 cases of incisional hernia (4.8%). All but 2 hernias occurred at the midline supraumbilical port. Six cases of incisional hernia have required repair to date, with 2 cases performed as an emergency procedure due to associated incarceration. Statistical analysis demonstrated a higher rate of incisional hernia in patients for whom the supraumbilical incision for specimen retrieval was closed with a continuous, rather than an interrupted suture technique ($p < 0.05$). Incisional hernias were associated with a significantly longer length of hospital stay (3.11 vs 4.25 days, $p < 0.05$).
Conclusions: Urologists should be aware that incisional hernia is an important post-operative complication following RARP. Closure of linea alba with a non-absorbable suture using an interrupted technique may help to minimize the incidence of this morbid complication.

P74

Prospective Randomized Trial of Barbed Polyglyconate Suture to Facilitate Vesicourethral Anastamosis during Robot-assisted Radical Prostatectomy: Time Reduction and Cost Benefit

Daniel Liberman[1], *Claudio Jeldres*[1], *Quoc-Dien Trinh*[2], *Hugues Widmer*[1], *Jean-Baptiste Lattouf*[1], *Daniel Liberman*[1], *Maxine Sun*[1], *Marco Bianchi*[1], *Pierre I. Karakiewicz*[1], *Ronald Denis*[1], *Gagan Gautam*[3], *Assaad El-Hakim*[1], *Kevin C. Zorn*[1].
[1]University of Montreal Health Center, Montreal, QC, Canada, [2]Vattikuti Urology Institutem, Henry Ford Health System, Detroit, MI, USA, [3]Section of Urology, University of Chicago Health Center, Chicago, IL, USA.
Introduction and Objective: Robotic vesicourethral anastomosis (VUA) using the Van Velthoven technique has significantly improved urinary reconstruction during robot-assisted radical prostatectomy(RARP). Recent case series have suggested that the use of barbed polyglyconate suture may facilitate VUA. Compared to standard monofilament posterior reconstruction (PR) and VUA technique, we sought to evaluate the effectiveness of VLOC 180 suture (Covidien, Mansfield, MA) for urinary reconstruction.
Methods: A prospective, randomized study was conducted in 70 consecutive RARP cases by a single surgeon (KCZ). Standard VUA was performed using three, 4-0 Monocryl sutures all secured with LapraTy clips (1 single 6 inch for PR and 2 attached 6 inch for VUA). The study group involved two, 3-0 6-inch VLOC 180 sutures, loop-interlocked and used for knotless PR and VUA. Assurance of watertight closure with a 300mL saline visual cystogram intraoperatively was performed in all cases. Time to complete the suture setup by the nursing personnel, anastomosis time and need to adjust suture tension were recorded. Suture related complications, validated-questionnaire continence and a cost analysis were also analyzed.
Results: Compared to our conventional reconstruction technique, there was a significant reduction in mean nurse setup time of suture material (31 vs 294sec; $p<0.01$) and reconstruction time (13.1 vs 20.8min ; $p<0.01$). Need to readjust suture tension or place additional LapraTy clips to establish a watertight closure was observed in 8(24%) vs 2 (6%) of cases ($p=0.03$). A cost reduction was also seen at our institution (48.05$ vs 70.25$CAN) with the use of the interlocked VLOC technique. Time to foley removal was comparable between groups (4.1 vs 4.2 days, $p=0.87$). With a mean followup of 6.2 months, no delayed clinical anastomotic leaks or bladder neck contractures were observed in either group. Pad-free continence outcomes at 1 (64%vs69%,$p=0.60$), 3 (76%vs81%,$p=0.54$) and 6 months (88%vs92%,$p=0.67$) were also comparable.
Conclusions: Compared to standard monofilament suture, the unidirectional barbed VLOC suture appears to provide a safe, more efficient and cost effective PR and VUA during RARP. Use of the interlocked VLOC suture technique prevents slippage, precluding the need for assistance, knot tying, and constant reassessing of anastomosis integrity.

P75
A Once Daily Titratable Gel Formulation for Transdermal Oxybutynin Delivery for OAB

David R. Staskin[1], *Kaushik Dave*[2].
[1]Tufts University School of Medicine, Boston, MA, USA, [2]Antares Pharma, Inc, Princeton, NJ, USA.

Background: A prospective randomized double blind placebo controlled trial of a once-daily titrable dose transdermal oxybutynin gel (TTOG) formulation for the treatment of overactive bladder (OAB). To date there are no available titrable once-daily transdermal agents for OAB.

Methods: 12 week study included adults (age range: 19-89) with OAB symptoms of urgency (UUI) and/or mixed UI for > 3 months. Inclusion: > 1 - 2 urge episodes and > 8 voids/day. Three treatment arms included: 84 mg oxybutynin gel, 56mg oxybutynin gel, and placebo. Primary endpoint: change from baseline in weekly (UI) using a three day diary. Secondary endpoints: change from baseline in daily urinary frequency and in urinary volume voided. Primary analysis population: modified intent to treat (mITT) population. Diaries: completed at baseline, and weeks 1, 2, 4, 8, and 12. Statistical assessment: pre-defined using transformation for group com-parison. The study was IRB approved. Gel formulation supplied as Anturol and study funding Antares Pharma, Inc., Ewing, NJ.

Results: Overall 626 patients (87% female) were included: TTOG 84mg (N=214), 56mg (N=210), and placebo (N= 202). Both dosing levels of the TTOG were statistically superior to placebo for UUI reduction and volume voided and the higher dose (84mg) for urinary frequency (Table 1). AEs were generally mild to moderate with non-prompted rates of dry mouth n= 26 (12.1%) for 84mg and n= 23 (11.0%) for 56mg TTOG and n=10 (5.0%) for placebo. CNS AEs were similar between both active arms and the placebo group. Skin irritation 84mg:13.1%, 56mg:13.3%, placebo:3.5%.

Conclusions: This is the first report of a titratable transdermal oxybutynin gel. TTOG provided significant improvement for OAB symptoms at both doses with reductions noted in primary and secondary outcomes. Side effects were mild to moderate with low levels of skin reactivity. TTOG provides an additional alternative for managing OAB symptoms.

P76
Safety and Cost Effectiveness of the AdVance™ Male Sling as a Day Procedure

David R. Harvey, *Marc Eric Saltel, BSc (Hon), Anthony J. Bella*.
University of Ottawa, Ottawa, ON, Canada.

Background: The AdVance™ male urethral sling is a treatment option for patients with mild to moderate stress urinary incontinence. Historically, patients were admitted for postoperative care, sometimes for up to 48 hours. We wanted to examine the use of cost-saving day surgery for the AdVance™ male sling while monitoring safety outcomes.

Table 1. P75.

Endpoints	Treatment Group: TT-Oxy gel 84mg/day (n=195)	TT-Oxy gel 56mg/day (n=171)	Placebo gel (n=166)
UUI/week, mean			
Baseline	43.6	50.1	45.8
Median Change	-18.7[x]	-21.0[xx]	-16.3
Micturitions/24 h			
Baseline, mean	11.4	11.7	10.5
Change, mean	-2.9[y]	-2.2	-1.9
Mean Voided Volume, mL			
Baseline	196.9	196.2	182.0
Change	29.0[z]	21.1[zz]	10.4

x - p = 0.033 xx - p = 0.028 y - p = 0.0005 z - p = 0.0017 zz - p = 0.0499

Methods: Consecutive patients undergoing male sling insertion at our institution between November 2008 and November 2010 were counselled preoperatively for day surgery. Patients left the operating room without a catheter and were given a trial of void. Those unable to void were catheterized and discharged. We monitored any postoperative complication or hospital re-admission closely. Continence rates were recorded and admission cost savings were estimated.

Results: 47 patients with an average age of 66.6 (SD=6.8) were included in this study. Complete resolution (zero pads) of stress incontinece occurred in 87.7% of our patients who had used 2 (SD 1) pads preoperatively. There were a total of 12 complications including: urinary retention (3), superficial wound infection (2), delayed wound hemorrhage on plavix, urethral trauma from chronic self-catheterization, acute MSK pain and intraoperative hypertension. There were no complications attributed to same-day discharge. There were no unexpected admissions.

Conclusions: Our results demonstrate that male urethral sling insertion may be safely performed as a day surgery. No complications were attributed to the lack of admission. In this study alone, we have estimated a cost savings of $47000. This approach to the AdVance™ male sling has the potential to save the healthcare system considerable money and resources while ensuring safety and efficiency in clinical care.

P77
Clinical Evaluation of the Transobturator Sling for Male Stress Urinary Incontinence

Sonia Chopra, *John Roehmholdt, Kent Chevli*.
University of Buffalo, Buffalo, NY, USA.

Background: The transobturator male sling has been proposed as a minimally invasive alternative to the artificial urinary sphincter for treatment of iatrogenic stress urinary incontinence, but data is still preliminary. The purpose of this study is to retrospectively analyze the efficacy of the AdVance male sling in achieving continence in patients who have undergone this procedure for the treatment of SUI.

Methods: 52 patients with SUI due to either prostatectomy or TURP with or without radiation underwent placement of a male sling between August 2008 and February 2011. Assessment of medical history, physical exam, and cystourethroscopy was performed on all patients before surgery. PVR and pad test also were evaluated pre- and 3 months post-operatively. We defined cure as zero to one dry pad for security, and improvement as greater than 50% decrease in pad usage or use of 1-2 pads.

Results: The majority of patients (88%) presented with incontinence after radical prostatectomy. Surgery was generally performed on an ambulatory basis with the catheter removed in most patients in 24 hours. At 3 months follow up, the cure rate was 69.2% and the improvement rate was 15.4%, for a total success rate of 84.6%. Failure rate was 15.4% with only 1 patient experiencing worsening of symptoms. A history of adjuvant radiotherapy was present in 25% of patients, with a success rate of 77% in that subgroup. In our study, prior radiation was not significantly associated with a higher failure rate (p = 0.396). Transient acute retention was noted postoperatively in 5.8% of patients. One patient developed a hematoma, and another developed de novo urge incontinence. No severe complications were noted.

Conclusions: Use of a transobturator sling for treatment of male SUI is an effective, minimally invasive option, even in patients with prior adjuvant radiation. Significant improvements in continence were noted at 3 months. Complications rates were low and easily manageable with conservative measures. Further studies are needed to assess long-term durability of continence with this procedure.

P78

Patient Satisfaction after Tension Free Vaginal Tape Insertion for Management of Stress Urinary Incontinence: Comparison between Transvaginal vs Transobturator Approach

Jerzy Gajewski, MD, *Ali Ali Al-Zahrani, Greg Bailly*.
Dalhousie University, Halifax, NS, Canada.

Background: This is a prospective follow-up for patient's satisfaction and long-term improvement after tension free vaginal tape insertion for management of stress urinary incontinence (SUI).

Methods: Patients who underwent tension free vaginal tape insertion for management of SUI were mailed with validated questionnaire to assess the degree of improvement and their satisfaction. Only patients with minimum of one year of follow-up were included in the study. All surgical procedures were done in one center. Patients were classified based on the surgical technique (Transobturator vs Transvaginal). Patient's improvement was assessed with International Consultation on Incontinence Questionnaire - Short Form (ICIQ-SF) while the satisfaction was assessed with global response assessment scale. Categorical variables were analyzed with Chi square and Fisher exact method while continues variables were analyzed with Mann-Whitney U test.

Results: There was 330 patients responded back to the questionnairs. The average age was 54.8 years (± 12.9) and the median follow-up was 143.9 (± 76.9) months?. A total of 128 (38.8%) patients underwent the TVT (transvaginal) technique while 202 (61.2%) underwent the TVT-O (transobturator) technique. All the patients had SUI as the main complain and indication for the procedure 209 (60.9%) reported their improvement as very marked and there was no statistical difference between both surgical technique (Table 3). The ICIQ-SF score dropped from an average of 15 (±4.1) to 4 (± 5.7) with no significant difference between both group. De novo overactive bladder was the commonest reported adverse event and it was seen in 18 (5.5%) patients. The rate of post-operative severe incomplete emptying was much higher in the TVT group but was seen only in 7 patients (5.7%)

Conclusions: The tension free vaginal tape insertion for management of SUI has good and durable long-term effect. More than 85% of patients report that their symptoms had at least moderately improved. The complication rate is low and comparable. The TVT technique had higher rate of post-operative incomplete emptying.

P79

Comparison Of Voiding Symptoms In Interstitial Cystitis Patients Having Mild Or Severe Pain

Deep B. Trivedi, MD, *Robert Mayer, MD.*
University of Rochester, Rochester, NY, USA.

Introduction: Patients with the visceral hypersensitivity syndrome of interstitial cystitis/bladder pain syndrome experience a variety of voiding symptoms as well as severity of pain. We evaluated our cohort of patients in regards to whether the severity of experienced pain would be associated in a different pattern of voiding symptoms and alter potential management.

Methods: A record review of patients with IC who completed an intake form was approved by our institutional IRB board. Patients reporting a current mild pain score 0-3/10 (n=83) were compared patients with severe pain 8-10/10 (n=48) with SPSS software and chi square analysis using p <0.05 as significant differences. Questions regarding presence of the following voiding complaints were recorded; urinary frequency, urinary urgency, pain or discomfort with bladder filling, dysuria or pain during voiding, pain after voiding, sensation of incomplete emptying, straining, hesitancy, and intermittency.

Results: The most common urinary complaints for the 131 subjects were related to urinary storage: urinary frequency (88%) followed by pain with bladder filling (76%) and urgency (66%). Symptoms associated with bladder emptying were generally less common: sensation of incomplete emptying (59%), pain during voiding/dysuria (44%), pain after voiding (41%), hesitancy (31%) and intermittency (27%) and straining (24%). When correlated with pain severity those with severe pain however had significantly greater likelihood of complaining of difficulty with emptying: hesitancy (56 vs 16%), intermittency (50 vs 14%), straining (38 vs 17%), in addition to more prevalent pain during (60 vs 35%) and after urination (60 vs 31%) as well as with bladder filling (96 vs 65%).

Conclusion: Patients with interstitial cystitis/bladder pain syndrome typically are characterized with storage symptoms of frequency, urgency and discomfort with bladder filling. With increasing levels of pain, voiding/emptying symptoms suggestive of sphincter dysfunction become significantly more prevalent and may impact choice of optimal therapy for relief of the condition. Higher pain scores should prompt clinicians to carefully assess patients for pelvic floor trigger points and consider pharmacologic and physiotherapy therapy for possible relaxation of pelvic floor and sphincter spasm

P80

Effects of Symptom Severity at Baseline on Oxybutynin Topical Gel-Mediated Improvement of Continence in Women

Peter K. Sand, MD[1], *Scott A. MacDiarmid, MD*[2], *Heather Thomas, PhD*[3].
[1]University of Chicago, Pritzker School of Medicine, Chicago, IL, USA, [2]Alliance Urology Specialists, Greensboro, NC, USA, [3]Watson Laboratories, Inc., Salt Lake City, UT, USA.

Background: Oxybutynin chloride topical gel (OTG) is a new transdermal formulation of oxybutynin, an antimuscarinic agent for the treatment of overactive bladder syndrome. In a pivotal 12-week, phase 3 study, OTG provided significant reductions in the number of daily incontinence episodes (IEs) compared with placebo. This post hoc analysis of data from female participants was conducted to assess the effects of incontinence severity at baseline on OTG-mediated improvement of continence in women.

Methods: Changes in the number of IEs/day from baseline to the last observation (study end) were determined separately in women who had 2 to 3 (moderate incontinence) and those who had >3 IEs/day at baseline (severe incontinence). Women with <2 IEs/day were excluded from the analysis. Differences between treatment groups were evaluated by analysis of covariance (for absolute changes from baseline) or analysis of variance (for percentage changes from baseline).

Results: Of the 704 female study participants, most (507) had severe incontinence; 145 had moderate incontinence. In both subgroups, women receiving OTG and those receiving placebo had similar numbers (mean±standard deviation) of IEs/day at baseline (moderate incontinence: OTG, 2.4±0.4 vs placebo, 2.5±0.4; severe incontinence: OTG, 6.7±2.9 vs placebo, 6.7±3.0). In both subgroups, women receiving OTG achieved significantly greater absolute improvement in continence than those receiving placebo ($P<.005$; Table). In addition, relative improvement was significant for OTG versus placebo in both subgroups ($P<.01$; Table 1). Among women with moderate incontinence at baseline, 48% of those who received OTG compared with 20% of those who received placebo achieved complete continence. Among women with severe incontinence at baseline, 17% of those who received OTG and 12% of those who received placebo achieved complete continence.

Conclusions: OTG compared with placebo provided statistically and clinically significant improvement of continence in women, irrespective of the severity of incontinence at baseline. Funding provided by Watson Laboratories, Inc.

Table 1. P80. Change from baseline to study end in daily incontinence episodes

	Moderate incontinence		Severe incontinence	
	OTG (n=75)	Placebo (n=70)	OTG (n=252)	Placebo (n=255)
Absolute change, mean±SD (No. of episodes)	–1.6±1.4	–1.1±1.3	–3.6±3.0	–3.1±3.3
P value, OTG vs placebo	.0030		.0034	
Percentage change, mean±SD	–67.8±55.8	–44.6±49.4	–56.2±40.9	–46.2±43.2
Median	–87.5	–52.8	–66.7	–50.0
P value, OTG vs placebo	.0094		.0074	

OTG, oxybutynin chloride topical gel; SD, standard deviation.

P81

Early versus Late Revision for Artificial Urinary Sphincters

Daniel Liberman, *Luc Valiquette.*
University of Montreal Health Center, Montreal, QC, Canada.

Introduction: Long term success with the artificial urinary sphincter (AUS) is common but device revision and replacement is a reality encountered by the surgeon. There is a paucity of information relating to the clinical implications of the time from implantation to revision in men with AUS. We report the clinical and peri-operative implications of time to revision in men with AUS.

Materials and Methods: The medical records of all patients undergoing AUS implantation and revision from a single center, single surgeon were reviewed between 1992 and 2010. Patient specific information was included in this analysis as well as preoperative clinical variables. Surgery specific data consisted of reason for revision, date of sphincter revision, and information on type of revision. Early complications were defined as a revision within 6 months of implantation and late complications were defined as revisions performed after 6 months of sphincter implantation. Chi square analysis was used to determine factors associated with early or late revision.

Results: 144 patients underwent a 2 incision bulbar urethral AUS implantation at the University Of Montreal Hospital Center between 1986 to 2010 by a single surgeon. Primary sphincter revision and secondary revision (>1 revision) were performed in 35 (24.3%) and 25 (17.4%) patients respectively. 8 (23.9%) compared to 25 (71.4%) patients had early and late primary revision respectively. The proportion of patients undergoing early or late revision was significantly related to the clinical indications for revision and the type of procedure performed. Specifically, 37.5% of early revisions were performed because of signs of infection with/without erosion and another 50% of early revisions were due to malfunction of the reservoir compared to only 20% of late revisions performed for infection with/without erosion (X2=0.009). Cuff revision was performed in only late revisions (24%) and an attempt at partial explantation was more likely to be performed in early revision than late revision (37.5% vs. 4.0%; X2=0.017).

Conclusion: An important predictor of AUS revision is the temporality of its complications. A large proportion of revisions within the first 6 months were due to infection or erosion. This should emphasize the necessity for improved sterile techniques and perhaps lavage with antibiotic solutions. Early erosions can be due to either improper selection of urethral cuff or urethral manipulations in the context of friable tissues. Partial explantation was attempted after 6 months since this allows for revision with well healed tissues with no other evidence of device malfunction.