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MP-04.01

Gender-specific Dosing of Desmopressin Orally Distintegrating Tablet for Nocturia

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Introduction and Objectives: Nocturia is associated with multiple negative outcomes when occurring ≥2 times/night. Desmopressin specifically targets overproduction of urine at night and gender-tailored dosing enables optimization of benefit vs. risk. We report key findings of confirmatory studies.

Methods: Two randomized, placebo-controlled, double-blind, age-stratified, 3-month multi-centre studies were performed in patients with ≥2 voids/night and no evidence of severe daytime voiding dysfunction or suspicion of bladder outlet obstruction. The dose of desmopressin orally disintegrating tablet (ODT) was 25 µg in females, and 50 or 75 µg in males. Endpoints/analyses were pre-defined and as per FDA consultation. As the efficacy of 75 µg did not differ from that of 50 µg in males, only efficacy details of 50 µg are included.

Results: The full analysis sets (FAS) comprised 261 women (range 19-87 years) and 385 men (range 20-87 years). Desmopressin ODT: (1) Reduced the mean number of nocturnal voids by -1.46 (vs. placebo: -0.22; p =0.028) in women and -1.25 (vs. placebo: -0.37; p=0.0003) in men. (2) Increased the odds of a ≥33% reduction in nocturnal voids vs. placebo by 85% (p=0.006) in women and 98% (p=0.0009) in men. (3) Increased the mean time to first nocturnal void and reduced the nocturnal urine volume by +155 min (vs. placebo: 49 min; p=0.003) and -235 ml (vs. placebo: -83 ml; p =0.003) in women and +112 min (vs. pbo: 39 min; p=0.006) and -209 ml (vs. placebo: -78 ml; p=0.009) in men. (4) Improved patient reported outcomes (including health-related quality of life, sleep quality, and daytime activity). (5) Was associated with a very low risk of hyponatraemia: Women, 25 µg: no serum sodium drops <125 mmol/L or treatment withdrawal due to hyponatremia. Men, 50 µg: serum sodium drops <130 mmol/L in 2 patients (aged 74 and 79) vs. 9 patients on 75 µg.

Conclusion: Gender-tailored dosing with desmopressin ODT provides specific, safe and efficient treatment for nocturia.

MP-04.02

Impact of OnabotulinumtoxinA on Urinary Incontinence and Quality of Life in Patients with Neurogenic Detrusor Overactivity Due to Multiple Sclerosis

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Introduction and Objectives: OnabotulinumtoxinA (onabotA) has been reported to significantly decrease urinary incontinence (UI) in patients with neurogenic detrusor overactivity (NDO) inadequately managed with anticholinergics (AC). We assessed efficacy and safety of onabotA in the subpopulation of multiple sclerosis (MS) patients in the pivotal studies.

Methods: Patients had NDO with ≥14 UI episodes/wk and an inadequate response/intolerable side effects on AC. Patients received 30 intradetrusor injections of PBO (n=131), onabotA 200U (n=130) or 300U (n=120), administered cystoscopically. Primary endpoint was change from baseline in UI episodes at week 6. Maximum cystometric capacity (MCC), voluntary voids/week, time to request for retreatment, Incontinence Quality of Life (I–QOL) total score, and adverse events (AEs) were assessed.

Results: Most patients were female with 29.4% on clean intermittent catheterization (CIC) at baseline. OnabotA significantly reduced UI episodes from baseline vs. PBO at week 6; mean decreases were -14.0, -22.6 and -24.0 episodes/week in PBO, onabotA 200U and 300U groups (p<0.05). At week 6, the proportion of patients with 100% reduction in UI (dry rate) was 10.7%, 41.5% and 44.2% respectively. MCC and I-QOL scores were significantly increased vs. PBO. The number of voluntary voids/ week at week 6 (in patients not on CIC at baseline) was significantly reduced with onabotA 200U (-16.8) and 300U (-25.8) vs. PBO (-2.9) (p<0.05). Retreatment could be requested 90 days after injection; median time to patient retreatment request was 295/307 days in the 200U/300U groups vs. 92 days for PBO (p<0.001). Most common AEs were UTI and urinary retention, which were more frequent with onabotA vs. PBO. The majority of patients not on CIC at baseline did not require it post-injection (59/86 [68.6%]) or required CIC for ≥18 weeks (10/86 [11.6%]).

Conclusions: OnabotA significantly improved UI, dry rates, frequency, MCC, and QOL in MS patients with UI due to NDO and was well tolerated. Median duration of effect was >9 months.

MP-04.03

Comparative Analysis of Buccal Mucosal Grafts and Penile Island Flaps for Reconstruction of Anterior Urethral Strictures

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Introduction and Objectives: The best treatment of long segment anterior urethral strictures remains a dilemma. Urethroplasty with tissue transfer is typically required but the optimal technique is unknown and comparative studies are lacking. The purpose of this study is to compare the efficacy of buccal mucosal grafts (BMG) and penile island flaps (PIF) for reconstruction of anterior urethral strictures.

Methods: Patients undergoing single stage urethroplasty with tissue transfer were abstracted from a prospective single centre urethroplasty database. Posterior urethral stenoses, strictures related to hypospadias and lichen sclerosus were excluded from analysis. Over an 8-year period, 291 patients with complete data underwent single stage urethroplasty with tissue transfer with 258 patients undergoing urethroplasty with BMG and 33 patients requiring a PIF. The primary outcome measure was urethral patency as defined by passage of a 16Fr flexible cystoscope. Secondary outcomes included postoperative ED, post-void dribbling and 90-day complication rates. Crosstab and Fisher's 2-sided Exact tests were used to compare outcome measures with a p-value of <0.05 defined as significant.

Results: Mean stricture length was 5.3±2.4 cm with the vast majority of strictures located in the bulbar urethra. Mean follow-up was 42 months for both groups. The efficacy of buccal mucosa and penile island flap urethroplasty was not significantly different with 93.4% and 90.9% patency rates respectively (p=0.484). There was no statistically significant difference in postoperative ED, postvoid dribbling or 90-day complications between the two groups (p=0.710; p=0.335; p=0.235 respectively).

Conclusions: Buccal mucosal grafts and penile island flaps appear equally efficacious when used to reconstruct anterior urethral strictures unrelated to hypospadias or lichen sclerosus. The reconstructive urologist should not hesitate to use a penile island flap in where graft take may be suboptimal.

MP-04.04

Renal Functional Outcomes Following Primary Ureteroureterostomy Performed During Multi-organ Resection in Cancer Patients

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Introduction and Objectives: Multi-organ resection in cancer patients may include partial ureteral resection, which may be reconstructed with a primary ureteroureterostomy (UU). However, whether long-term renal function is maintained in such patients remains unclear. We investigated renal function and presence/absence of anatomic obstruction following UU to determine the long-term efficacy of this reconstruction.

Methods: We retrospectively reviewed the charts of cancer patients who underwent multi-organ resection and UU between 1995 and 2012. Renal imaging studies performed before and after UU were assessed for hydronephrosis. Renal function was assessed by comparing estimated glomerular filtration rate (eGFR) before and after UU. Patients who developed cancer recurrence involving the UU were censored from further follow-up. The length of ureteral defect was defined as the length of resected ureter reported by the pathologist in the pathology report or, if no pathologic measurement was available, the length of ureteral defect as reported by the surgeon in the operative report.

Results: Twenty four patients underwent UU during multi-organ resection. Median follow-up time was 52 months. One patient developed progressive hydronephrosis with a greater than 20% drop in eGFR from baseline. Six additional patients developed progressive hydronephrosis due to cancer recurrence involving the UU and were censored at the time of recurrence. Although the remaining 17 patients showed stable eGFR and no new onset hydronephrosis (including 5 patients with > 10 years followup), 6 of these patients have relapsed distant from the UU and 5 have died of cancer. In the present study, UU was successful in 6 patients whose ureteral defect was 4-5.6 cm. The single patient in whom UU failed had a ureteral defect of 8.5 cm.

Conclusions: Primary UU maintains renal function in the majority of patients and is best when the resected ureteral length is less than 5 cm.

MP-04.05

Comparison of Complications Following Radical Cystectomy for Benign or Malignant Bladder Disease

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Introduction and Objectives: Radical cystectomy (RC) is performed for benign (neurogenic bladder, radiation cystitis) or malignant (muscle-invasive bladder cancer) disease and can have high morbidity and mortality. As a quality assurance project, we sought to create a database to compare and review major variables between RC for benign and malignant disease.

Methods: We retrospectively identified patients who received RC by 2 urologists (RJB, KVC) in Calgary, AB, 2005-12. Preoperative and perioperative variables were reviewed and postoperative complications in hospital and in readmission <90 days were assessed with the modified Clavien grading system. The χ^2 and 2-tailed student t tests were used to evaluate data.

Results: Of 71 patients, 16 had benign and 55 had malignant disease. 68.7% (benign) vs. 44.4% of patients had an American Society of Anesthesiologists Score of 3 or higher; p=0.09. Ileal conduit was formed in 100% (benign) vs. 94.5%; p=0.34. Mean operative time was 192.9 (benign) vs. 215.7 min; p=0.13 and estimated blood loss was 615.4 (benign) vs. 989.6 mL; p=0.22. Median length of stay was 14 days (range 8-51; benign) vs. 11 (6-146); p=0.86. In the malignant group, 32.7% had positive node status and 16.4% had positive surgical margins. In hospital, the benign group had similar rates of overall (62.5% vs. 40.0%; p=0.11) and major (12.5% vs. 18.2%; p=0.09) complications. Rates of readmission were 37.5% (benign) vs. 38.2%; p=0.96 and major complications were 12.5% (benign) vs. 9.1%; p=0.90. Grade V complication rates were 0.0% in hospital but in readmission were 12.5% (benign) vs. 1.8%.

Conclusions: Our major complication rates in hospital of 12.5% (benign) and 18.2% compare favourably to other centres. This series is unique given the large volume report of RC for benign disease. Our overall readmission rate of 38.0% highlights the complexity of the RC population.

MP-04.06

Onabotulinumtoxin A Injections in Patients with Neurogenic Bladder and Indwelling Urinary Catheter

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Introduction and Objectives: Evidence for the efficacy and safety of intravesical onabotulinumtoxin A injections has led to it being increasingly used in patients with urinary incontinence due to urogenic detrusor overactivity who are refractory or intolerant to the gold-standard treatment, anticholinergics. We aimed to report our experience with a subgroup of patients with long term used of indwelling catheter.

Methods: The charts of all patients under chronic indwelling catheterization who received intravesical onabotulinumtoxin A injections were reviewed. Clinical data about the injections, the urological evaluation, the neurological status and other comorbidities were recorded.

Results: Twenty-one (21) patients had a long term indwelling catheter at the time of their injection (11 males, 10 females). Combined, they received 66 injections (median 2(1-8)) with a median dose of 300U (100-300U) under germ-specific antibiotic treatment. Neurological diagnoses were: spinal cord injury (14), multiple sclerosis (6), and spina bifida (1). Complications recorded were: symptomatic autonomic dysreflexia (3), pyelonephritis (1) and a myocardial infarction (MI). Cystitis numbers

are unknown considering the difficult interpretation in this population with permanent stenting with chronic colonisation status. Quality of life questionnaire were not available, but patient asked to be reinjected after the relief of their symptoms and the better comfort with their catheter, even after MI.
Conclusions: Onabotulinumtoxin A injection in patients with indwelling urinary catheter and persistent neurogenic detrusor overactivity is feasible with relief of patient catheter-related symptoms and high bladder pressure. Onabotulinumtoxin A injections should be offer to this population when anticholinergics are insufficient.

MP-04.07
Increasing Use of Sacral Neuromodulation Procedures in Females Amongst Certifying American Urologists
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Introduction and Objectives: Refractory overactive bladder (OAB) syndrome remains a management challenge to urologists. When multiple medical therapies have failed, treatment options may include sacral neuromodulation (SNM) or surgery such as augmentation cystoplasty. We investigated the surgical practice patterns of American urologists performing procedures for refractory OAB in females over the last decade.
Methods: Annualized case log data for OAB procedures from certifying and recertifying urologists were obtained from the American Board of Urology (ABU), ranging from 2003-2012. Associations between surgeon characteristics (type of certification, annual volume, practice type and location) and use of OAB procedures were evaluated.
Results: Over the past decade 756 of 6355 urologists certifying or recertifying with the ABU performed procedures for the treatment of refractory OAB. 45 surgeons (6%) completed fellowships in female urology and 72 surgeons (10%) completed another type of fellowship program. Recertifying surgeons performed 70% of all sacroneuromodulation (SNM) procedures. The total number of OAB procedures has consistently increased from 64 to 2086 between 2003 -2012. That increase was driven by the increase in SNM cases: 48 to 2068 cases (years 2003-2012). Rates of enterocystoplasty have remained stable annually between 14-38 cases, though as an OAB procedure they have declined relatively from 25% of all OAB procedures in 2003 to <1% in 2012.
Conclusions: The burden of refractory OAB has grown significantly over the past decade. OAB procedures now represent at least 12% of all captured female urology cases performed by urologists. While the use of enterocystoplasties has always been less common than SNM in the past decade, the use of SNM has nearly replaced the use of enterocystoplasties for all patients in recent years.

MP-04.08
Novel Urinary Tract Reconstruction during Extensive Radial Pelvic Surgery - The Ileal-ureter Cystoplasty
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Introduction: Large locally invasive colorectal, sarcoma, and gynecologic tumours often invade adjacent genitourinary structures necessitating en-bloc resection of large segments of ureter and bladder. Ipsilateral vascular compromise and large bladder resection present a challenge. Combined ileal ureter substitution and augmentation cystoplasty - the "ileal-ureter cystoplasty", may be performed. We present our series of patients undergoing this combined procedure at a high volume cancer centre.
Methods: A DataLine search through the institutional database identified patients between January 2005 and December 2012 who had at least one out of twelve CPT codes corresponding to a list of possible bladder or ureteric reconstructive surgeries in patients also undergoing non-GU surgery. 142 unique patients were identified as having had 160 records. A thorough chart review identified only those patients who had an "ileal-ureter cystoplasty" (n=10).
Results: 10 ileal-ureter cystoplasty procedures were identified. The primary diagnosis of the patients included sarcoma (n=4), gynecologic malignancy (n=3), and colorectal malignancy (n=3). All cases included en bloc resection of large portions of bladder and ureter along with adjacent structures such as, iliac vasculature, pelvic sidewall, sacral nerves, bowel, abdominal and retroperitoneal musculature. The average length of ileum used was 22 cm (R=10-40cm). All 10 patients had prior pelvic surgery and 7 patients had prior pelvic radiotherapy. 8 patients had minor complications (Clavien <3) while 2 had major complications (Clavien >2). 9/10 patients were able to spontaneously void after the procedure.
Conclusions: The "ileal-ureter cystoplasty" is a useful surgical technique to bridge defects cause by ureteric resection with ipsilateral bladder vascular supply compromise or rectus flap reconstruction. This reconstructive option provides combined ureteral replacement and bladder augmentation, with reasonable functional outcomes and a reasonably low complication rate.

MP-04.09
Surgical Practice Patterns for Female Stress Urinary Incontinence: Analysis of Case Logs from Certifying American Urologists
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Introduction and Objectives: Surgical correction of female stress urinary incontinence has undergone a transformation over the past decade with the introduction of mid-urethral sling procedures. Other classic repairs - Burch or Marshall-Marchetti-Krantz (MMK) - and peri-urethral bulking agents may be used. Rates of urethrolysis for repairing previous mid-urethral slings were examined. We investigated contemporary trends in the use of these treatments.
Methods: Annualized case log data for female incontinence surgeries from certifying and recertifying urologists were obtained from the American Board of Urology (ABU). Associations between surgeon characteristics (type of certification, annual volume, practice type and practice location) and use of female incontinence procedures were evaluated.
Results: A total of 6355 non-pediatric urologists applied for re/certification between 2003 and 2012. Two-thirds (4185) reported performing any procedures for female incontinence. The number of procedures reported sharply increased from 4,632 procedures in 2003 to 7548 procedures in 2004. Cases remained relatively more stable between 2005 and 2012 (range 8,014 - 10,238 cases). The proportion of classic procedures decreased from 17% in 2003 to 5% in 2004 to <1% since 2010 ($p<0.0005$). Conversely, mid-urethral sling procedures have risen sharply from 3,210 procedures in 2003 to 7200 in 2012 ($p<0.0005$). Endoscopic injection treatments have remained fairly stable. Urethrolysis procedures made up a very small proportion of cases. Annual case counts ranged from 2 to 560 per year with a median of 12 (interquartile range (IQR) 6 - 24).
Conclusions: The mid-urethral sling has been widely adopted by urologists over the last ten years. Concurrent with this increase in sling usage was a drastic decline in classic repairs, implying newer mid-urethral slings were replacing them for the treatment of female incontinence. In addition, use of peri-urethral injections did not change.

MP-04.10
Clean Intermittent Catheterization: Which Patients Benefit From It?
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Introduction: Clean intermittent catheterization (CIC) is used for poor bladder emptying due to neurogenic and non-neurogenic causes. CIC may reduce incontinence, urinary tract infections (UTI's) and lower urinary tract symptoms (LUTS) in the face of poor emptying. However, not all patients on CIC realize symptomatic benefit. Our aim was to determine which patients with poor bladder emptying benefit from using CIC to reduce incontinence, UTI's and LUTS.
Methods: We evaluated the medical records of 321 patients between 1995 and 2011 with neurogenic (n=144) and non-neurogenic (n=177) bladder dysfunction who were started on CIC after urodynamic testing. The median age of the neurogenic group was 48 years (range 18-85) and 68 years (range 24-90) for the non-neurogenic group. The following data

were obtained for all patients; age, sex, chief complaint (incontinence, recurrent UTIs, LUTS or urinary retention alone), date of initiation and follow-up of CIC, outcome, postvoid residuals (PVRs), who performed CIC (patient or nurse), medical history and medications used. Success was considered to be no UTI's, resolution of LUTS and incontinence on CIC. The median followup was 1.5 years.
Results: The overall success rate on CIC was 51%. In general men < 65 years of age do better on CIC (63% success). The highest success rate was in men and women with retention only (68% and 69% respectively), and men with poor emptying and UTIs (75% success). Patients on CIC that did poorly were women ≥65 years of age regardless of the reason for CIC (37% success), all women with incontinence (37% success) and non-neurogenic women with UTIs (43% success). Non-neurogenic male patients and all women with LUTS did poorly with CIC (29% and 18% success). The most common reasons for failure on CIC were recurrent UTI's, persistent incontinence and LUTS.
Conclusions: CIC works best in men and women who are treated solely for urinary retention or large PVRs. Furthermore, men <65 years of age are also more successful with CIC regardless of the indication. Women ≥65 years of age on CIC for reasons of poor emptying and recurrent UTIs, incontinence and LUTS do poorly. Our data may identify those patients who are likely to do well on CIC.

MP-04.11

Novel Uroflow Stop Test at Time of Catheter Removal is a Strong Predictor of Early Urinary Continence Recovery Following Robotic-assisted Radical Prostatectomy

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Purpose: To study whether the ability to completely stop urinary flow during voiding at time of catheter removal, measured objectively using uroflometry, can predict early recovery of urine continence following robotic-assisted radical prostatectomy (RARP).
Materials and Methods: In this prospective study, 108 patients with a minimum of 2 year follow-up, operated by a single surgeon (AEH) were subjected to an uroflowmetry at the time of urethral catheter removal following RARP. Normal Saline (150 ml) was instilled intravesically prior to catheter removal and patients were instructed to attempt to stop urine flow during voiding in uroflowmeter. Two groups were studied, group one with positive Stop Test (n=80) and group two with negative Stop Test (n=28). Demographic and clinical data were analyzed. Covariates included age, BMI, IPSS score, PSA, tumour stage, prostate volume, nerve sparing status and estimated blood loss. Primary end-point was urinary continence defined as 0-pad use up to 6 months postoperatively. All statistical analyses were performed using Stat (StataCorp LP, College Station, TX 77845 USA). P values of <0.05 were considered statistically significant.
Results: Basic characteristics were not statistically different between both groups. Mean follow-up (± SD) was X months ± Y (range X-Y). Early continence recovery was significantly higher in group one. Pad-free continence rates in group one and two at 1, 3, 6, 12, 18 and 24 months were 62% vs. 7% (p<0.001), 85.7% vs. 28.5% (p<0.001), 93.5% vs. 67.8% (p=0.001), 93.5% vs. 82.1% (p=0.079), 97.3% vs. 82.1% (p=0.006), and 97.4% vs. 85.7% (p=0.023), respectively. Uroflow StopTest was the only independent predictor of early urine continence recovery on univariate and multivariate regression analysis [OR 2.87 (95% CI 1.34-4.38, p£0.001)].
Conclusions: Novel use of uroflowmetry at time of urethral catheter removal is a simple, non-invasive study with independent ability to predict early continence recovery following RARP.

MP-04.12

Four Year Persistence and Drug Treatment Patterns in Overactive Bladder: Data From Canadian Datasets

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Introduction: Overactive bladder (OAB) is a prevalent, bothersome condition. Despite its impact on morbidity and quality of life, persistence with antimuscarinics is poor compared to other chronic conditions. In the UK, only 13.5-35% of OAB patients remained on treatment 12 months after initial prescription with a mean persistence of 129 days. Likewise in the US, 35% didn't refill their prescription when drugs were at no cost. This study aimed to investigate the long-term persistence and treatment transitions of OAB antimuscarinics in Canada.
Methods: Using data from IMS Brogan's Public and Private Drug Plans Databases (PDP, RAMQ, OPDP), patients receiving a first prescription for an OAB drug between April07-March08 were followed for 4 years. A further 3 months was assessed to ascertain continuation of treatment. Prescribing patterns, including initial and up to 6 treatment changes were identified. The average number of continuous days on any one treatment was calculated.
Results: Data were available for 31,833 patients. The median number of drugs prescribed was 2. Initial prescription (oxybutynin/other) did not affect the number of drugs used over 4 years. Table 1 shows treatment patterns by initial prescription and dataset. The majority of patients did not move past 2 agents. The mean time (days), for which patients were prescribed initial therapy was: oxybutynin (337); tolterodine (327); tolterodine ER (410); trospium chloride (356); flavoxate (123); solifenacin (456), darifenacin (336). Drug persistence and number of drugs prescribed over four years by initial prescription and drug plan No change-Patients con-

Table 1. MP-04.12

	PDP-oxybutynin	PDP-other	RAMQ-oxybutynin	RAMQ-other	OPDP-oxybutynin	OPDP-other
Total patients, (n)	4736	5479	3424	549	8208	9437
1 drug	3478	3924	2150	359	5604	7503
Discontinued, (%)	88.9	87.5	87.1	81.6	85.3	78.0
1-2 drugs	929	1156	961	134	2281	1705
1-3 drugs	270	327	276	49	303	217
1-4 drugs	50	65	36	6	20	11
>4 drugs	59	72	37	7	20	12
% patients on						
1 drug	73.4	71.6	62.8	65.4	68.3	79.5
1-2 drugs	19.6	21.1	28.1	24.4	27.8	18.1
1-3 drugs	5.7	6.0	8.1	8.9	3.7	2.3
1-4 drugs	1.1	1.2	1.1	1.1	0.2	0.1
>4 drugs	1.2	1.3	1.1	1.3	0.2	0.1

PDP: private drug plan; RAMQ: Régie de l'assurance maladie du Québec; OPDP: Ontario Public Drug Plans.

tinued initial prescribed drug without any change Discontinued-Patients who do not switch and do not continue treatment Private Drug Plans (PDP), Régie de l'assurance maladie du Québec (RAMQ), Ontario Public Drug Plans (OPDP) (Table 1).
Conclusions: Long-term persistence with antimuscarinics is poor, regardless of prescribed medication.

MP-04.13
Lower Urinary Tract Reconstruction After Radiation Therapy for Pelvic Cancer

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Introduction and Objectives: Pelvic radiation therapy (RT) for colorectal, gynecological or urological malignancies may compromise the urinary tract. Lower urinary tract (LUT) reconstruction in such cases can be quite challenging especially when combined with surgical extirpation. As an alternative to diversion, enterocystoplasty with or without ureteral reimplantation brings the potential benefits of preserving body habitus and urethral voiding.
Methods: The records of patients treated at our institution between 1994 and 2012 who had undergone LUT reconstruction after pelvic RT were reviewed. Complications and functional results were recorded.
Results: Twenty-one patients who had received prior RT for treatment of advanced or recurrent pelvic cancer in the absence of unresectable distant disease were identified. Ten patients underwent reconstruction as part of primary tumour excision after neoadjuvant radiation (group 1) and 11 had surgery due to radiation complications (group 2). Mean age at surgery was 56 years. All patients underwent enterocystoplasty and 15 (71%) of these had simultaneous ureteral reimplants into an afferent limb. Urinary complication rate was 33% and was similar in both groups (p=0.34). Two patients developed anastomotic strictures managed successfully with stenting and 4 developed mild hydronephrosis managed expectantly. No renal functional deterioration and no pouch or anastomotic leaks were observed. Sixteen patients were able to void spontaneously and 5 had to perform CIC. Urinary incontinence was noted in 3 patients. After a median follow-up of 24 months, 1 patient had died of recurrent cancer, 3 were alive with disease recurrence, and 17 had no evidence of disease.
Conclusions: This series demonstrates that in the hands of an experienced surgical team, previous pelvic RT is not a contraindication to enterocystoplasty with or without ureteral reimplantation and that it can be achieved with satisfactory functional outcomes and acceptable morbidity.

MP-04.14
Retrospective Evaluation of Efficacy and Safety of Argus Sling for Treatment of Male Stress Urinary Incontinence: The Canadian Experience

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Introduction and Objectives: The Argus transobturator male sling for stress urinary incontinence (SUI) can be performed after radiation and is adjustable postoperatively. We aim to report the efficacy and safety in the first North American series of patients.
Methods: The records of 96 patients treated at 8 Canadian institutions since 2010 were reviewed. Continence status and complications were recorded.
Results: Of the 96 patients, 25 had mild (1-2 pads), 57 had moderate (3-5 pads) and 14 had severe (> 5 pads) incontinence. With a mean follow-up of 8.9 months (range 1.0-25.7), improvement in continence status was noted in 92%, with 57% being completely dry. There was a significant reduction in daily pad use from 3.8 to 0.9 (p<0.0001). Twenty-one (22%) men had previous radiation and their outcomes were similar to those who did not. Adjustment was necessary in 17 (18%) cases: loosening (1/96) or tightening (16/96) at an average of 192 days. No device erosion was seen. The overall complication rate was 65%, the most common of which was early postoperative perineal discomfort, in 38%. This resolved in most but 7 patients had persistent pain. Other complications included 3 intraoperative urethral/bladder perforations, 8 de novo OAB symptoms, 4 UTIs, 3 wound infections, 19 patients with transient urinary retention and 2 with chronic retention. Nine patients required Argus removal because of sling breakage (3), sling infection (2), incontinence (2), chronic retention (1), or chronic scrotal pain (1).
Conclusions: The Argus sling was found to be highly effective to treat male SUI, even after radiation therapy. Although mostly minor and self-limited, a non-negligible complication rate was seen, which raises concerns especially about postoperative perineal pain. We plan to continue reporting outcomes after extended follow-up.

MP-04.15
Reconstruction of Vaginal Tissue Using the Self-assembly Method

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Introduction and Objectives: Vulvovaginal surgical reconstruction indications vary widely, from congenital absence of vagina to urogenital sinus malformation, cloacal exstrophy and oncologic exanteration. No perfect tissues for such surgeries have been found yet, and the need for autologous vaginal tissue is desirable. In this experience, we aimed at defining the ideal culture conditions for building a model of vaginal tissue using the self-assembly method. These tissues, produced only with human cells and free of exogenous materials, could eventually be used for completely autologous surgical reconstruction.
Methods: Human dermal fibroblasts produce extracellular matrix sheets (stroma) in 4 weeks. Due to poor availability of vaginal epithelial cells (VEC), immortalized VEC (VK2/E6E7 from ATCC) were used. Cells were seeded on stroma and grown for another week in DH, completed with epidermal growth factor (EGF), other additives and 10% Fetal Bovine Sera (FBS), before epithelial maturation at the air/liquid interface for 4 weeks. 36 equivalents were produced, using 6 different culture conditions (n=6). One of each went for histology at 1 and 2 weeks, the remaining going for permeability/histology at 4 weeks.
Results: Histology showed, in most conditions, a multilayered epithelium covering the stromal compartment, confirming the ability of VEC to adhere and grow on a human stroma in our culture conditions. Hormonal additives did not modify the histologic appearance. Epithelium has grown successfully without EGF. Permeability tests were performed, showing a tissue comparable to native vaginal epithelium for all conditions, except when grown without FBS.
Conclusions: We present the first model of reconstructed vaginal tissue, which is 100% free of exogenous materials, in this emerging field of tissue engineering, opening the way to produce human autologous vaginal tissue. Further studies on the protein expression profile of the epithelium are to be made in the near future.

MP-04.16
Greenlight HPS-120W vs. Greenlight XPS-180W Laser Vaporization of the Prostate for Benign Prostatic Hyperplasia: A Global, Multicentre, and Prospective Comparative Analysis According to Prostate Size

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Introduction and Objectives: The aim was to evaluate the surgical performance and impact of prostate volume (PV) of the new Greenlight XPS-180W laser system (AMS, Minnetonka, MI, USA) in comparison with the former generation HPS-120W system for the treatment of BPH by photo-selective vaporization of the prostate (PVP).

Methods: From July 2007 to March 2012, a total of 1809 patients underwent Greenlight laser PVP for the treatment of BPH performed at 7 international centres. 1187 cases were performed using HPS-120W and 622 cases using XPS-180W laser system. Preoperative data along with operative parameters were all collected prospectively. Comparative analysis was performed between XPS and HPS treatment modalities and according to PV <80 and >80 cc.

Results: The XPS compared to HPS, allowed significantly reduced laser and operative time with a mean lasing time of 29.6 min vs. 65.8 min and total operative time of 53 min vs. 80 min respectively ($p<0.01$ for both). The number of fiber used during procedures was significantly reduced with the XPS system 1.11 vs. 2.28 fiber ($p<0.01$) while total energy delivered was 250.2 vs. 267.7 kJ ($p=0.043$) respectively. Overall, using XPS and HPS systems, the mean operative time (104.3 vs. 55.6 min), mean laser time (86.5 vs. 37.3 min) and mean energy usages (400 vs. 197 kJ) were all significantly increased according to PV >80 cc vs. <80cc. However, when stratified according to PV, XPS demonstrates significant advantages compared to HPS regardless of prostate size in all operative parameters ($p<0.01$).

Conclusion: The XPS-180W system exhibits reduced operative time and laser time with reduced total energy delivery suggesting a significant increased efficiency compared to the HPS-120W system. Overall, both with XPS-180W and HPS-120W mean operative time, laser time and energy usage increased according to prostate size. This suggests evaluation of PV should be a mandatory assessment as part of preoperative evaluation of Greenlight PVP because it has direct implications for the operating parameters including operative time and therefore can assist in more efficient scheduling of operating room time.