mid-distal urethral erosions who had more incontinence. Patients with more distal erosions also had a greater chance of symptom cure or improvement after repair.

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## 1869
### PROLAPSE FOLLOW-UP AT 5 YEARS OR MORE: MYTH OR REALITY?

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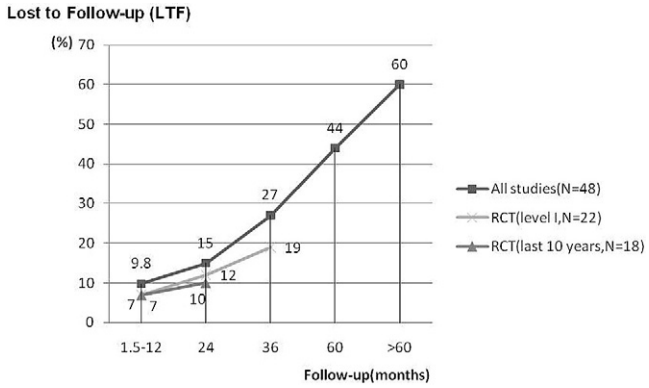
INTRODUCTION AND OBJECTIVES: To study the lost to follow-up (LTF) rate in level I/II evidence- based studies related to the surgical management of pelvic organ prolapse (POP).

METHODS: Randomized clinical trials (level I) or non-randomized but prospective studies (level II) related to the surgical treatment of POP from January 1995 to November 2010 were searched on PUBMED. Data reviewed included types of study, number of participating centers or hospitals, sample size calculation, surgical techniques, power calculation, estimated dropout rate, duration of follow-up, rate and reasons for LTF.

RESULTS: 48 articles (4776 women) -22 randomized clinical trials (RCT) and 26 non-randomized prospective studies- met the inclusion criteria. 21 articles gave details on sample size calculation, and only 5 explained their LTF rate after reaching LTF patients by mail or telephone. Percentages of LTF patients were 9.8% (255/2609) at $\leq$ 12 months in 26 articles, 15% (184/1232) at 24 months in 12 articles, 27% (114/420) at 36 months in 8 articles, 44% (272/615) at 60 months in 4 articles and 60% (273/456) at $>$ 60 months in 3 articles. When only RCT (ie level I) studies were examined (N=22), the LTF rate trended up to 20% at 3 years, with no such studies extending out further. Among the more recent RCT studies ($<$ 10 years) (N=18), the longest follow-up was $\leq$ 2 years with a low LTF rate (figure). Fifteen articles reported no missing data mostly because of small sample size or short follow-up. Only 3 articles defined LTF patients as treatment failure or successes and reported outcomes accordingly.

CONCLUSIONS: Based on this contemporary review of the literature on POP, we found an acceptable attrition rate (10–20%) in studies with 2–3 year follow-up time, but a much larger rate in studies extending 3–5 years out. Meaningful long-term follow-up reporting at 5 years, as usually recommended after POP repair, may be unrealistic.

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## 1870
### IS "OAB-DRY" REALLY DRY?

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INTRODUCTION AND OBJECTIVES: Overactive bladder (OAB) is defined by the International Continence Society as urinary urgency with or without urge urinary incontinence, usually with frequency and nocturia. Community-based surveys have identified a predominance of OAB-dry (70%). We conducted patient focus groups and expert interviews to better understand perspectives on differences in symptoms between OAB-wet and OAB-dry.

METHODS: After IRB approval was obtained, patients in Female and General Urology clinics were identified by ICD-9 codes for OAB symptoms and recruited. Patients with pelvic pain/IC, mixed stress and urge incontinence, prolapse, or recent pelvic surgery were excluded. Medical records were reviewed to assure that patients in the OAB-dry groups had no history of urge incontinence. Five focus groups totaling 33 patients (3 OAB-wet and 2 OAB-dry groups) were conducted. Non-clinician moderators conducted the focus groups incorporating topics related to patients' perceptions of OAB symptoms, treatments, and outcomes. Twelve expert interviews were conducted in which they were asked to describe their views on OAB-wet and OAB-dry. Qualitative data analysis was performed on verbatim transcriptions using grounded theory methodology as described by Charmaz.

RESULTS: Extensive chart review was performed. Difficulty was encountered identifying pure OAB-dry patients. Women with OAB-dry shared the knowledge that they will leak if no toilet is available based on a history of past leakage episodes. Most women with OAB-dry wore light protective pads. Those few patients with no history of leakage had a clinical picture more consistent with bladder hypersensitivity/IC than OAB. Physician expert interviews revealed the belief that OAB-dry may be an early, milder form of OAB-wet.

CONCLUSIONS: Our findings from patient focus groups and expert interviews shed light on problems with defining OAB. Questionnaires may identify anyone with polyuria, bladder hypersensitivity, and even OAB-wet with rare leakage episodes as OAB-dry. Qualitative data from focus groups and expert interviews suggests that women with OAB-dry may not, in fact, be truly dry. Rather, a spectrum exists between very mild OAB-wet to more severe OAB-wet.

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## 1871
### TESTING THE EFFICACY OF INTRAVESICAL HYALURONIC ACID INSTILLATIONS IN THE PREVENTION OF RECURRENT URINARY TRACT INFECTIONS

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INTRODUCTION AND OBJECTIVES: Hyaluronic acid constitutes an important proportion of bladder surface glycosaminoglycans and represents a barrier of the urothelium that may help to prevent urinary tract infection (UTI). Damage to this layer has been postulated as a causative factor in the development of recurrent UTI. To date, few studies addressed the role of hyaluronic acid in patients with recurrent cystitis. We tested the efficacy of intravesical hyaluronic acid instillation against recurrent UTI in a contemporary group of patients referred to our Institution.

METHODS: Between January 2006 an January 2009, we recruited 48 fertile women with recurrent cystitis who received 8 instillations (once weekly for 8 weeks) of hyaluronic acid HA (CystistatR, Bioniche Life Sciences Inc, Belleville, Ontario, Canada) at the dose of 40 mg in 50 mL of phosphate buffered saline solution. All patients had a clinical history of recurrent cystitis, defined as at least 3 episodes of uncomplicated cystitis with clinical symptoms and a positive culture for each episode, according to the European Association of Urology guidelines. In all patients, recurrent UTIs were lasting from at least 15 months, with a frequency of 1 episode every 4–6 weeks. All patients were prospectively evaluated over an 18 months follow-up period.

RESULTS: Mean age was 36.91 years (range 25–48 years). The most commonly diagnosed pathogen was E. Coli (76%). After the 8-week therapy, 36 patients (75.0%) were free of their disease and did not show any clinical and cultural recurrence during the 18 months follow-up period. Conversely, 10 patients (20.8%) showed a recurrence

of their disease during the follow up period. However, in this patient category, the mean time to recurrence significantly increased from 39.85 days (range 23–55 days) before treatment to 190.64 days (range 170–211 days) after treatment (p-value $<0.001$). Finally, 2 patients (4.2%) experienced a recurrence during the 8 weeks of intravesical instillations. All patients tolerated the instillations well and no serious adverse events were reported during the study period.

CONCLUSIONS: Intravescical hyaluronic acid instillations appears to be a safe and feasible therapeutic option that strongly reduce the incidence of recurrent UTI in fertile women. Prospective randomized studies are still needed to further validate our results.

**Source of Funding:** None

## 1872

### OVERACTIVE BLADDER SYMPTOMS (OAB) AND DETRUSOR OVERACTIVITY (DO) IN PATIENTS WITH POSTERIOR VAULT PROLAPSE: PREVALENCE AND ITS CHANGES AFTER POP REPAIR

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INTRODUCTION AND OBJECTIVES: There is a sporadic and inconclusive evidence of a relationship between POP compartment or stage and OAB symptoms and/or DO. Even though we often find that posterior vault prolapse is associated with urgency symptoms in the clinical setting and in some cases with DO, their interrelation is not as evident as might be expected. We try to investigate the relationship between POP with predominant posterior compartment prolapse and OAB and their changes after POP surgical repair.

METHODS: Forty-three patients (mean age 62.9 $\pm$ 9.8, range 45–77 years) with posterior vault prolapse (i.e. with predominant posterior compartment prolapse) underwent surgery for POP repair. Twenty-eight patients received a colposacropexy (CSP) (24 abdominal and 4 laparoscopic ) and 15 were treated by vaginal approach (sacrospinous ligament suspension and posterior colporrhaphy). Patients underwent an accurate preoperative evaluation. All patients were followed-up for 1, 3, 6 and 12 months postoperatively and then annually. Outcomes were assessed objectively and subjectively using a symptoms investigation including constipation, anatomical/physical examination, patient questionnaires (IIQ7-UDI6) and urodynamic tests. Objective anatomical success was defined as the cervix and/or vaginal apex remaining well supported $>6$ cm above the hymen plane and no vaginal prolapse greater than or equal to stage 2 at any vaginal site (POP-Q classification). Subjective success was absence of symptoms related to prolapse or OAB. Patient satisfaction was defined by a VAS score (0–10).

RESULTS: The mean follow-up was 75$\pm$ 45 months (range 14–187). Preoperatively, 33/43 (76.74%) reported OAB. DO was found in 11/43 (25.6%), although 2 of them have no symptoms. Anatomical outcome showed posterior compartment prolapse persistence (rectocele) 2 was present in 3 patients (6.9%). However no one required a further surgery to correct the recurrence. Post-operative OAB symptoms disappeared in 25/33 (75.88%) patients, post-operative storage symptoms persisted in 8/33 (24.2%) patients. No one reported de novo urgency. DO disappeared in 8/11 (72.7%) patients which was associated in 2 cases to post operative bladder outlet obstruction at urodynamic assessment. Constipation was present in 16/33 (48.5%) patients with OAB and disappeared in 13/16 (81.2%) postoperatively.

CONCLUSIONS: We found that prevalent posterior compartment POP and OAB are often associated. After surgery we observed a significant reduction of OAB and DO.

**Source of Funding:** None

## 1873

### MESH EROSIONS INTO THE LOWER URINARY TRACT: CORRELATION TO INTRA-OPERATIVE CYSTOSCOPY

*Laura Chang Kit*, Melissa Kaufman, WS Reynolds, Roger Dmochowski, Nashville, TN*

INTRODUCTION AND OBJECTIVES: Tertiary care centers have witnessed an increase in referrals for mesh erosion into the lower urinary tract. We evaluated key aspects of the source procedures to identify factors contributing to graft erosion.

METHODS: Medical records of female patients referred for mesh erosion into the lower urinary tract from January 2000 to August 2010 were reviewed. Patients were excluded if their source procedure operative report was not available. We recorded age, hospital type, implanting surgeon, anaesthetic, source procedure, graft material, concomitant surgeries, intra-operative cystoscopy, complications, and erosion location.

RESULTS: 36 patients were referred for mesh erosion over the ten year period. Source procedure records were available for 18 patients (50%). All procedures were conducted at community hospitals. 11 operations (61%) were performed by gynaecologists and 7 (39%) by urologists. 17 patients (94%) had a polypropylene mid-urethral sling. 7 patients (39%) had a concomitant vaginal procedure (3 hysterectomies, 4 prolapse repairs). Intra-operative cystoscopy was performed by 78% (14) of surgeons (4/11 gynecologists (36%) did not perform). 5 patients (28%) had recognized intra-operative complications which were repaired by their operating gynaecologists. 60% of these injuries were detected on intra-operative cystoscopy. 6 patients (33%) had an immediate post-operative complication. Erosions occurred at the urethra (39%) and bladder walls (39%) more frequently than at the bladder neck (11%) and trigone (11%).

CONCLUSIONS: Patients with mesh erosion into the urinary tract often have a protracted course of management prior to referral. Details of source procedures are difficult to obtain, and are frequently poorly documented, thus only 50% of patients were included. Almost 30% of patients had a documented intra- or peri-operative complication at the time of their source procedure. Most patients underwent intra-operative cystoscopy, allowing early recognition of bladder injuries in 60% of cases. However, in 79% of patients undergoing cystoscopy, no mesh was visualized, despite most erosions occurring at conspicuous areas. This may imply that mesh erosions can develop over time, rather than result directly from misplacement of graft into the urinary tract. This data additionally reveals the exceptional risk of proceeding with mesh placement following known intra-operative urinary tract injury.

**Source of Funding:** None

## 1874

### SURGICAL ALGORITHM FOR COMPLEX POLYPROPYLENE MESH COMPLICATIONS: RECURRENT VAGINAL WALL EXTRUSIONS AND URINARY TRACT EROSIONS

*David Hadley*, Brian Flynn, Aurora, CO*

INTRODUCTION AND OBJECTIVES: Polypropylene mesh is used commonly in stress urinary incontinence (SUI) and pelvic organ prolapse (POP) surgery. Extrusion of mesh into the vagina and/or erosion into the urinary tract can result in severe complications often necessitating partial or complete mesh removal and reconstruction. We present our treatment algorithm and discuss our series of patients undergoing urologic reconstruction for mesh complications.

METHODS: A prospectively maintained database of all surgical cases of pelvic reconstruction following a mesh complication, from 2003 to 2010, was analyzed. Treatment was based upon our algorithm for the management of mesh complications. Based on this algorithm, patients were classified as having either simple or complex graft complication, and treated accordingly. Simple management included in office 'trimming' of the exposed mesh or surgical excision and closure of the wound in the operating room. Complex management constituted near or total mesh explantation, washout, repair of the defect and