

## W17: Current State of the Evaluation and Management of Lower Urinary Symptoms in Women

Workshop Chair: Roger Dmochowski, United States

03 September 2019 16:00 - 17:30

Start	End	Topic	Speakers
16:00	16:05	Introduction and overview of workshop	Roger Dmochowski
16:05	16:15	Epidemiology and population studies about lower urinary symptoms in women	Ömer Bayrak
16:15	16:25	Chronic infections & inflammation of lower urinary tract	William Reynolds
16:25	16:35	The underactive bladder in women: diagnosis and treatment	Ömer Bayrak
16:35	16:50	Recent advances in bladder pain syndrome	Rahmi Onur
16:50	17:05	Nonsurgical treatments for lower urinary symptoms in women	Angie Rantell
17:05	17:25	Surgical treatments for lower urinary symptoms in women	Roger Dmochowski
17:25	17:30	Discussion	Roger Dmochowski Rahmi Onur William Reynolds Ömer Bayrak

### **Aims of Workshop**

Lower urinary tract symptoms in women include various complaints related to urine storage, voiding and symptoms related to pelvic floor dysfunction. The workshop will provide theoretical and practical knowledge of all outpatient / office procedures available for women in the management of infection-inflammation of lower urinary tract, underactive bladder and bladder pain syndrome. In addition, this workshop is intended to serve as a valuable resource for clinicians with an interest in the nonsurgical and surgical treatment options for lower urinary tract symptoms in women.

### **Learning Objectives**

to define the pathologies causing lower urinary tract symptoms in women

### **Target Audience**

Urology /urogynecology / urology and gynecology nursing

### **Advanced/Basic**

Basic

### **Suggested Learning before Workshop Attendance**

Cox L, Rovner ES. Lower urinary tract symptoms in women: epidemiology, diagnosis, and management. *Curr Opin Urol.* 2016 Jul;26(4):328-33.

## **Epidemiology And Population Studies About Lower Urinary Symptoms In Women**

**Omer Bayrack**

**Gazientep, Turkey**

Lower urinary tract symptoms (LUTS) contain a variety of bothersome storage (frequency, urgency, urgency, incontinence), voiding (poor flow, intermittency, hesitancy, straining, dysuria, overflow incontinence), and postmicturition (terminal dribble, postvoid dribble, sense of incomplete emptying) symptoms. Many adult women experience LUTS, and the prevalence of these symptoms increase with age. The prevalence of at least one LUTS for women was reported as, at least 'sometimes': 76.3%, at least 'often': 52.5%. Storage symptoms associated with overactive bladder were more prevalent than men. The prevalence of all LUTS increased with advancing age in men, but only certain LUTS [urgency, urgency with fear of leaking, poor flow, urge urinary incontinence (UUI), nocturnal enuresis] increased with age in women. In addition, healthy population of young nulligravid women the prevalence of LUTS and urinary incontinence (UI) was high, but with relatively low bother LUTS.

Incontinence was also highly prevalent in women. Approximately 25% of women under age 40 report stress urinary incontinence (SUI) during physical activity. After the first pregnancy, the odds of having SUI increased by 2.7-fold; up to a fourfold increased risk with 5 or more pregnancies. The risk of developing severe SUI and UUI was equivalent regardless of the mode of birth. Age at first delivery was associated with risk of UI. Women who delivered their first baby after the age of 30 had an increased risk of severe UI later in life, and required more surgical interventions than those who delivered when they were younger. More than 200 million people worldwide, and over 15% of women aged 40 years or older were estimated to be suffering from UI. Of working women between ages 18–60, 37% reported urine leakage during the previous 30 days. More than 88% of these women reported a negative impact on quality of life. 50% of women with LUTS and UI experience sexual dysfunction, which is a high rate compared with generally healthy women.

Aging and comorbid conditions, particularly diabetes and neurological disease, are associated with increased risk of LUTS. But only 26% of individuals with LUTS seek healthcare. Women had higher odds of treatment seeking with more frequent UI, more bothersome symptoms, worsening of incontinence, and longer duration of urinary incontinence. Women who saw physicians regularly, and who had preventive healthcare were also more likely to seek care. Race or ethnicity, socioeconomic measures, and education were not significantly related to seeking treatment for UI.

## **Chronic infections & inflammation of lower urinary tract**

**W. Stuart Reynolds, MD MPH**

Lower urinary tract infections affect a large proportion of women around the world and represent a significant clinical burden to the patient and to the healthcare system. Urinary tract infections can be broadly categorized into uncomplicated and complicated, with different management strategies for each. Recent clinical guidelines, such as AUA guidelines on Recurrent Uncomplicated Urinary Tract Infections in Women (2019), can help shed light on care of these patients who can be difficult to manage effectively. Management strategies for both complicated and uncomplicated UTIs will be reviewed in this workshop presentation. In addition, approach and management strategies for asymptomatic bacteriuria, which represents an additional clinical challenge for providers, will be reviewed.

## **The underactive bladder in women: diagnosis and treatment**

**Omer Bayrack**

**Gazientep, Turkey**

Underactive bladder (UAB) is characterized by a slow urinary stream, hesitancy and straining to void, with or without a feeling of incomplete bladder emptying sometimes with storage symptoms. This differs from detrusor underactivity (DU) which is a diagnosis based on urodynamic study (UDS). DU is defined by International Continence Society, as a bladder contraction of reduced strength and/or duration resulting in prolonged or incomplete emptying of the bladder, and acontractile detrusor is specified when there is no contraction. UAB and DU certainly coexist in many patients. In patients referred for UDS assesment, DU is diagnosed in 12% to 45% of females, more common in elderly nursing home residents. Neurological disorders, aging, diabetes, pharmacotherapy and failure of sphincteric relaxation have been emphasized as the major etiological factors causing UAB. The lack of a standart test to diagnose and quantify DU contributes to our currently limited knowledge, in female patients. A slow take-off with low maximum flow rate, prolonged voiding time, and multiple intervals can be observed on uroflowmeter. It is hard to make a decision for differential diagnosis of DU and bladder outlet obstruction with pressure flow study. All algorithms were developed for adult men, and have not been validated for women. Particular threshold values to define DU are unknown. But a few formulations have been proposed for DU in women.

The aims of the UAB treatment are listed as; to empty the bladder , to prevent possible damage to the upper urinary tract, and to reduce the risk of complications from the impaired bladder emptying (recurrent urinary tract infection, bladder stone formation, overflow incontinence, urinary retention). Unfortunately, treatment of UAB is still not satisfactory, and pharmacotherapy is insufficient. Currently, clean intermittent catheterization is the standard treatment in the management of the patients, who cannot have effective bladder emptying. Studies have shown that cholinergic agents contribute to detrusor contraction and facilitate bladder emptying, but it is not recommended to use in practice because of frequent and possible

serious side effects. Alpha blockers (tamsulosin, silodosin, naftopidil) are stated as effective agents in female patients with voiding difficulty and subnormal maximal voiding values. Among the surgical methods, sacral neuromodulation has been approved by the Food and Drug Administration in the management of nonobstructive urinary retention, and it is currently performed in experienced centers as an effective and reliable method.

## **Advances in Bladder Pain Syndrome**

**Rahmi Onur, MD**

Marmara University Faculty of Medicine, Department of Urology, Istanbul Turkey

Bladder pain syndrome (BPS), Interstitial cystitis (IC) or painful bladder syndrome (PBS) are terms often used interchangeably to define a cluster of symptoms. International Continence Society defines "BPS (including IC)" as "persistent or recurrent chronic pelvic pain, pressure or discomfort perceived to be related to the urinary bladder accompanied by at least one other urinary symptom such as an urgent need to void or urinary frequency. Diagnosed in the absence of any identifiable pathology which could explain these symptoms<sup>1</sup>.

Required symptoms for diagnosis of BPS/IC in all guidelines are pain, pressure, discomfort, frequency, urgency and nocturia. A detailed history, examination, questionnaire(s), psychological examination, urine analysis, postvoid residual urine measurement and appropriate tests are used. Urodynamics is not routinely recommended. However, cystoscopy under general anesthesia is preferred in most of the guidelines<sup>2</sup>.

First-line treatments include patient education, stress management, dietary modifications, analgesics and pelvic floor rehabilitation. Different oral medications used include amitriptyline, antibiotics, azathioprine, cimetidine, cortisone, cyclosporine, doxycycline, gabapentin, methotrexate, nifedipine, vitamin E. However, level of evidence for use of these drugs are low except for sodium pentosanpolysulfate and hydroxyzine<sup>3</sup>. There are new agents such as IPD-1151T (Suplatast Tosilate), quercetin, montelukast, misoprostol. IPD-1151T is an immunoregulator that selectively suppresses IgE production and helper T cells that produce IL-4 and 5. Quercetin, a bioflavonoid acts through anti-inflammatory actions. Montelukast is used for mast cell stabilization. There are anecdotal studies regarding positive responses with misoprostol, an oral prostaglandin analogue and cyclosporine<sup>3,4</sup>. AQX-1125 is a new pharmaceutical class of compounds that activate SHIP1 protein, a modulator of phosphoinositide signaling<sup>5</sup>.

Currently used intravesical therapies include heparin, hyaluronic acid, chondroitin sulphate, pentosan polysulfate, capsaicin/resiniferotoxin, DMSO and several cocktails<sup>6</sup>. Lidocaine can be used combined with heparin/sodium bicarbonate and continuous lidocaine releasing intravesical irrigation using elastomer polymers was also used in a small number of patients<sup>4</sup>. Intradetrusor Botulinum toxin injection of 100-U has been shown to effectively reduce bladder pain. Recently, botulinum toxin is combined with hydrodistention to provide better efficacy. There are novel studies examining the efficacy and feasibility of new delivery methods into the bladder such as hydrogel-based slow release (TC-3 Gel) botulinum toxin and new intravesical therapies such as liposomes, liposomal-mediated botulinum toxin injections and liposomal tacrolimus<sup>4</sup>.

In a recent meta-analysis it was shown that sacral neuromodulation is a safe and acceptable treatment option for chronic pelvic pain in selected patients. The role in treatment was supported by level 2b studies with grade B recommendation. While accepted as promising treatments, ICS suggests both botulinum toxin and sacral neuromodulation to be considered as investigational<sup>3</sup>. Finally, surgery is rarely performed and has been commonly used only for refractory BPS/IC patients<sup>3,6</sup>. Cytolysis, peripheral or sympathetic denervation is not indicated in BPS/IC. Cystoplasty with supratrigonal resection or subtrigonal cystectomy with cystoplasty may provide some benefit but grade of recommendation is weak<sup>3</sup>. Simple urinary diversion with formation of an ileal conduit or continent diversion can be used the last option in highly selected patients.

## **References.**

- 1- <https://www.ics.org/committees/standardisation/terminologydiscussions/icbps>
- 2- Pape J, Falconi G, Lourenco D, et al. Variations in bladder pain syndrome/interstitial cystitis definitions, pathogenesis, diagnostics and treatment: a systematic review and evaluation of national and international guidelines. *Int Urogynecol J* 2019 May 9.
- 3- [https://www.ics.org/Publications/ICI\\_3/v2.pdf/chap23.pdf](https://www.ics.org/Publications/ICI_3/v2.pdf/chap23.pdf)
- 4- Meng E, Hsu Y, Chuang Y. Advances in intravesical therapy for BPS/IC. *LUTS* 2018;10:3-11.
- 5- Nickel JC, Egerdie B, Davis E, et al. A Phase II Study of the Efficacy and Safety of the Novel Oral SHIP1 Activator AQX-1125 in Subjects with Moderate to Severe Interstitial Cystitis/Bladder Pain Syndrome. *J Uro* 2016, 196: 747-54.
- 6- <https://uroweb.org/guideline/chronic-pelvic-pain/>

## **Non-Surgical treatment of lower urinary tract symptom**

**Angie Rantell, Lead Nurse Urogynaecology**

Non-surgical treatment should be offered as first line treatment for all women with lower urinary tract symptoms (LUTS). This is recommended by the National Institute for Health and Care Excellence (NICE 2019) and the International Consultation on Incontinence (ICI 2017) and should be embraced by all health care practitioners.

Non-surgical management principally involves lifestyle interventions, physical therapies, scheduled voiding regimes, complementary therapies, anti-incontinence devices, supportive pessaries, containment products and catheters. Lifestyle interventions includes advice on weight loss, reduction of physical forces, cessation of smoking, reducing caffeine, fluid management and relieving constipation. Conservative management has a rightful place in the treatment of women with UI, but has limitations as patients can become disillusioned with expected outcomes. Patient education, regular assessment and good communication are therefore essential to ensure patient compliance, cooperation and motivation which are paramount to the successful outcome of treatment.

Alongside these conservative measures, pharmacological management of LUTS is necessary for some women. There are many different drugs available for the treatment and management of LUTS. This session aims to provide an overview of not only the conservative therapies previously mentioned but also the current licensed pharmacological therapies available to treat symptoms of frequency, urgency and urge incontinence. It will also examine the use of medication in the treatment of women with stress urinary incontinence, nocturnal enuresis, nocturia, Genitourinary syndrome of the menopause and bladder pain.

Non-surgical management of LUTS many be provided by a variety of different health care professionals including staff in primary care along with specialist nurse, physiotherapists, urotherapists and medics in specialist services.

By the end of this talk, the listener should have an understanding of the wide variety of non-surgical management options available in the treatment of LUTS and the relevant evidence for this. Recommendations for practice will be made in line with national and international guidelines.

## **Surgical treatments for lower urinary symptoms in women**

**Roger Dmochowski MD, MMHC, FACS**

Once the decision has been made for surgical intervention, a critical assessment of patient desires and expectations in light of co-morbidities and other factors should be performed. Realistic expectations must be established with an emphasis on symptomatic improvement balanced with intervention related risks.

Interventions discussed should include urethral bulking and surgical therapies inclusiv of tapes (if allowed by national standards, colposuspensions, and biologic slings. A clear delineation of the trade-offs between the interventions should be made and documented.