Urogynecology in EDS

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“One in three like me”
Voiding Issues
Frequency/Urgency
Urinary Incontinence

“neurogenic bladder”
Neurologic supply of the bladder
Evaluation of Bladder Issues

• History
• Urinary Diary
• Physical examination
• Post void residual test
  – Ultrasound or catheter
• Urodynamics
Urodynamic Testing

Urodynamics is a series of tests that evaluate how well your bladder, urinary sphincter, and urethra work. These tests focus on how well the bladder fills and empties.

**Bladder Function Tests**
Your urologist or urogynecologist may recommend urodynamics, or urodynamic testing, if you have:
- Urine leakage.
- Frequent urination.
- Painful urination.
- Sudden, strong urges to urinate.
- Problems starting a urine stream.
- Problems emptying the bladder completely.

Urodynamics tests examine what the bladder and urethra are doing if urine leakage occurs. For example, the tests can show if involuntary bladder contractions (spasms) are causing urinary incontinence.

Urodynamics is not usually painful and most women do well. It can feel unusual to focus so much on urinating in a room with another person, but this test is very helpful to your care. No general anesthesia is required. You can drive yourself home afterward or return to work. Some results may be available immediately or the results may take several days.

**Before the Procedure**
You may be asked to stop taking certain medicines in preparation for the procedure. Ask if there are things you should do before testing, such as:
- Stop taking certain medicines prior to the procedure,
Voiding Issues

• Symptoms
  – Urinary hesitancy
  – Slow stream
  – Urinary frequency
  – Bladder infections
  – Kidney problems

• Causes
  – Inadequate detrusor contraction
  – **Inadequate urethral relaxation**
  – High tone pelvic floor
  – Pelvic organ prolapse
• Inadequate urethral sphincter relaxation
  – Pelvic floor physical therapy
  – Medications
    • Cardura
    • tamsulosin
  – Self catheterization
• **High tone pelvic floor**
  - Pelvic floor physical therapy
  - Relaxation techniques
  - Muscle relaxants
  - Vaginal suppositories
Urinary Frequency and Urgency

- Voiding dysfunction
- Overactive bladder
- Interstitial cystitis
Overactive Bladder
OAB – treatment options

Behavioral modifications
- weight loss
- avoidance of bladder irritants
- fluid management
OAB - treatment

- Pelvic floor muscle exercises
- Physical therapy

If you are experiencing urinary leakage, pelvic floor muscle exercises (Kegels) and bladder training are two things you can do to help control your urinary symptoms.
OAB - treatment

- Medications
  - anticholinergics
    - oxybutynin
    - tolterodine
    - darifenicine
    - solifenicine
  - trospium
- Beta agonist
  - mirabegron
Percutaneous Tibial Nerve Stimulation
Sacral Nerve Stimulation
Botox
Interstitial cystitis/Painful bladder syndrome

• AUA (2011)
  – unpleasant sensation (pain, pressure, discomfort) perceived to be related to the urinary bladder, associated with lower urinary tract symptoms of more than six weeks duration, in the absence of infection or other identifiable causes.

• ICS (2002)
  – the complaint of suprapubic pain related to bladder filling, accompanied by other symptoms such as increased daytime and night-time frequency, in the absence of proven urinary infection or other obvious pathology
Pathophysicsology

• No recognized comprehensive pathophysiological explanation

• Theories include
  • Autoimmune
  • Systemic disease
  • Neurogenic inflammation
  • Allergic/Mast cell activation
  • Defective GAG layer (‘leaky epithelium’)
Pathophysiology
Multifactorial Model

Initiating event

Change in urothelial function

‘Leaky’ Urothelium

Sensitization of peripheral nerves

Release of substance P and inflammatory mediators

Mast cell activation

Vascular congestion and protein extravasation
Diagnosis

Typical appearance of glomerulations after bladder distention in a patient with nonulcerative IC

Typical appearance of Hunner’s ulcer in an IC patient before bladder distention
First Line Treatments

• General relaxation/stress management
• Pain management
  – Calcium Glycerophosphate, phenazopyrididine, aloe vera
• Pt education
• Behavioral modification
  – Adequate water, dietary modifications
Second Line Treatments

- Appropriate manual physical therapy techniques
- Oral: amitriptyline, cimetidine, hydroxyzine, Pentosan polysulfate
- Intravesical: DMSO, heparin, lidocaine
- Pain management
Physical Therapy for IC/PBS

- Myofascial trigger point therapy for 10 IC and 42 with frequency/urgency syndrome
- 8-12 weeks manual physical therapy, 1-2 times per week
- Symptom Outcome score
- 70% of IC pts moderate to marked improvement
  - Ward Urol 166 (2226-31) 2001

- Over 80% of patients with IC/PBS seek physical therapy treatment and find it helpful
  - O'Hare PG et al; IUJ 2012
Third Line therapies

- Cystoscopy under anesthesia with hydrodistention
- Neuromodulation
- Intravesical botox
Types of Urinary Incontinence

Stress Incontinence
Urge Incontinence
Mixed Incontinence
Functional Incontinence
Overflow Incontinence
Fistula
Stress Incontinence

• Leakage of urine during physical movement or activity
  – Coughing, Laughing, Sneezing, Running, Exercising, Lifting, Straining

• Increases in abdominal pressure are transmitted to the bladder
Stress Incontinence

Stress Urinary Incontinence (SUI)

Loss of urethral support

BARD
Treatment for Stress Incontinence

- Pelvic Floor Exercises
- Pessary/Impressa
- Surgery
- Urethral injections
Pelvic Floor Exercises
Pelvic Floor Muscle Therapy

• Kegel, 1948
  – Successful therapy of 64 patients with SUI
Electrical Stimulation
Pessary
Impressa

- bladder
- urethra
- vagina
Transvaginal Sling
• Unique aspects
  – Involvement of pelvic floor muscles
  – Tethered cord
  – Mast cell activation
  – POTS
  – Multiple medications

• Recommendations
  – Knowledgeable provider
  – Conservative treatments
  – Pelvic physical therapist