IPPS Pre-Conference Session

Clinical Foundations:
An Integrated Approach to the Evaluation and Treatment of Chronic Pelvic Pain

Wednesday October 11, 2017
7:30 a.m. – 5:30 p.m.
Location: Renaissance Washington DC Hotel | Penn Quarter (2nd Floor)

Urological Conditions associated with Pelvic Pain

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Disclosures:

none

Urological Conditions

• Urethra

• Bladder
URO - Urethritis

• Ureaplasma urealyticum/Mycoplasma hominis
• 48 pts. “chronic voiding symptoms, possible IC”
• 48% had + culture

The bladder disease complex includes a large group of patients with bladder and/or urethral and/or pelvic pain, lower urinary tract symptoms, and sterile urine cultures, many with specific identifiable causes.

- IC/BPS comprises a part of this complex.

AUA Guidelines 2014

URO - Bladder

- Bladder Pain Syndrome/Interstitial Cystitis (BPS/IC)
- OTHER causes of pain, frequency, urgency
- Inflammatory Cystitis -- other
  - Eosinophilic cystitis
  - Radiation cystitis
  - BCG cystitis
  - Cystitis assoc. with systemic inflammation
  - Etiology unknown
Interstitial Cystitis/Bladder Pain Syndrome

• Unpleasant sensation (pain, pressure, discomfort) perceived to be related to the urinary bladder
• Assoc. w/ urinary tract symptoms > 6 wks duration
• Absence of infection or other identifiable etiologies

• Society for Urodynamics and Female Urology (SUFU)
History of IC

- 1805, 1836 Physick, Parrish
  “tic doloureux of the bladder”
- 1870 Skene
  “interstitial cystitis”
- 1915 Hunner erythematosus bladder lesions
- 1980s severe cases – NIDDK criteria
- Current

NIDDK criteria

- Revised NIDDK criteria (1990)
  - Pain associated with the bladder of urinary urgency and glomerulations or Hunner’s ulcer on cystoscopy under anesthesia in patients with 9 months or more of symptoms, at least 8 voids per day, and cystometric bladder capacity of less than 350 ml
  - 60% of patients with clinical diagnosis of IC/PBS do not meet fulfill NIDDK criteria
BPS/IC

• Pathophysiology

IC/PBS: Theories of pathophysiology/etiology

• Defective/dysfunctional bladder epithelium
• Mast cell activation/inflammation
• “Toxic” urine
• Hypoxia
• Allergy
• Neurogenic inflammation
• Central sensitization to stress
• Other pelvic issues

• INTERACTION AMONG PATHOGENIC FACTORS

Role of GAG layer in IC/PBS:
Defective Urothelial Barrier

- Irritating Solutes
- Urothelium
- Irritated Nerve
- GAG Layer
- Inflammation

Pathophysiology of IC/PBS

- MORE inflammation
- windup
- pain
- Bladder epithelial insult
- K⁺ leak
- Inflammation
- Release of neurotransmitters
- inflammatory mediators
- Sensitization
- WIND-UP
- “Metastatic” pain
- Muscle spasticity

Nociceptors in the pelvis

- **Viscera** (bladder, urethra, ureters, prostate, uterus, adnexa, vagina, bowel, testicles)
- distention, traction, ischemia, inflammation
- autonomic nerves
- may be stimulus-specific, intensity-specific, or typically silent (turn “on” after prolonged stimulation)

- **Somatic structures** (muscles, skin, fascia, bone)
- cutting, crushing, burning
- sensory/motor nerves

Viscerosomatic convergence
Viscerosomatic convergence

**Normal function**
coordination of body functions

**Pathology**
severe or chronic noxious stimuli
alterations in pain processing
increased excitability, altered central processing, messages amplified, output expanded

Viscerovisceral Hyperalgesia
Viscero-Muscular Reflex

Why did Adele cross the road?
To say "hello" from the other side!
BPS/IC

• Diagnosis

BPS/IC  DIAGNOSIS

• Careful history
• Physical examination
• Good quality urinalysis
• Urine culture

• Other (workup pyuria, hematuria, etc.)
  • AUA Guidelines 2014: Clinical Principle/Expert Opinion
BPS/IC HISTORY

- Unpleasant sensation perceived as related to bladder
- Frequency (constancy)
- Relief with voiding
- Number of voids/day
- Duration of symptoms
- Pain levels (to measure subsequent rx. effects)

BPS/IC PHYSICAL EXAMINATION

- Abdominal exam
  - masses, tenderness, muscle assessment (iliopsoas, recti)
- Pelvic exam
  - assess external genitalia
  - palpate urethra (tenderness, “stripping”, fullness, induration, mobility)
  - palpate base of bladder
  - assess pelvic floor musculature
  - brief neurological exam
  - rule out vaginitis, urethritis, tender prostate, urethral diverticulum or other potential source of pain or infection
BPS/IC  DIAGNOSTIC STUDIES

• GOOD QUALITY Urinalysis
• Urine culture
• Post-void residual
• Cystoscopy and/or urodynamics ONLY for complex presentations
  consider as an aid in diagnosis
  DEFINITELY for abnormal UA
  DEFINITELY for lack of response to treatment

AUA Guidelines:  Expert Opinion
N. Gerig, MD:  Expert Opinion

BPS/IC  TREATMENT
BPS/IC TREATMENT

• Initial rx. type and level should depend on
  symptom severity
  clinician judgment
  patient preferences

Appropriate entry points into the rx. algorithm depend on these factors

AUA Guidelines 2014: Clinical Principle

BPS/IC TREATMENT

• First-line treatments
  Patient education
  Self-care practices and behavioral modification
    dietary modulation
    fluid management (hydration or restriction)
  Stress management

AUA Guidelines 2014: Clinical principle
BPS/IC TREATMENT

• Second-line treatment
  
  Appropriate manual physical therapy
  (pelvic floor strengthening should be avoided) Evidence level A
  
  Multimodal pain management pharmacological –
  amitriptyline, cimetidine, hydroxyzine, pentosan polysulfate
  DMSO, heparin, lidocaine intravesical rx.

  Evidence level B,C

AUA Guidelines: 2014

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BPS/IC TREATMENT

• Third-line treatments
  
  Cystoscopy under anesthesia with short-duration, low-pressure hydrodistention
  
  Fulguration or injection (steroid) Hunner’s lesions
  Payne 2016 “oncological approach”

• Then
  
  Botox, neurostimulation, Cyclosporine A
  Surgical intervention
  augmentation cystoplasty, urinary diversion, cystectomy
BPS/IC  TREATMENT

• NOT recommended:
  long-term oral antibiotic administration
  intravesical instillation of BCG
  high-pressure, long-duration hydrodistention
  long-term systemic glucocorticoid administration

AUA Clinical Guidelines: 2014

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An education is not how much you have committed to memory, or even how much you know. It is being able to differentiate between what you do know and what you do not know.

Anatole France
1844 – 1964
French poet, journalist, and novelist