Bladder Pain Syndrome

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What's in a name?

- Quite a lot apparently!!

  - IC 2633 (2069)*
  - PBS 2712 (2128)*
  - BPS 1012 (619)*

Source : Pubmed March 2014 (2010)

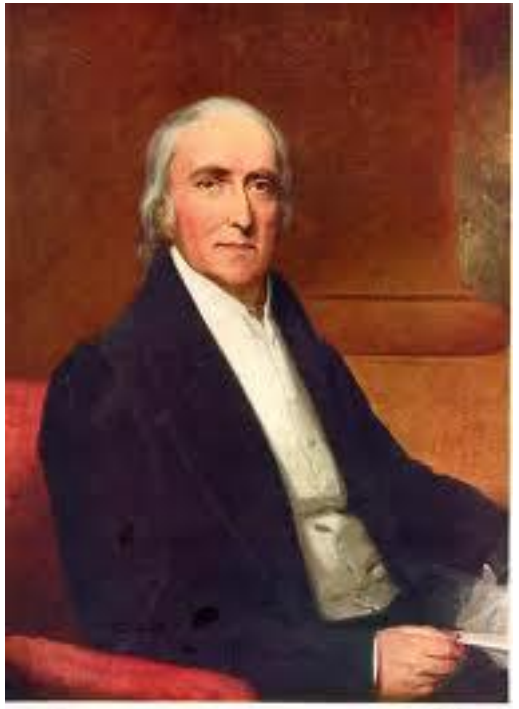
Preferred term of :
1. EAU
2. AUA
3. ICS
4. ESSIC (ESSBPS)

Bladder Pain Syndrome

- History
- Definition
- Classification
- Scoring Systems
- Associations
- Management

History

- Philip Syng Physick (1768 - 1837)
  - 1808 : Concept
  - "tic doloureux of the bladder."
  - Ulceration
  - Severe LUTS
  - Unknown aetiology
  - 1836 : Textbook



“Father of American Surgery”

Definition

- Variable with respect to duration
  - » 6 weeks to 6 months
- Research v Practical
- Pain, pressure, discomfort related to, or perceived to be from, the bladder plus one other urinary symptom eg: urgency, frequency
- An unpleasant sensation perceived to be related to the urinary bladder, associated with LUTS of more than 6 weeks duration, in the absence of infection or other identifiable causes

Van de Merwe et al E.Urol 2008
Hanno et al. Neurourol Urodyn 2010
Hanno & Dmochowski Nuro & Urodyn. 2009.

Definition : NIDDK

- Rand IC Epidemiology study
  - 2 Definitions
    - 1. High specificity, low sensitivity
    - 2. High sensitivity, low specificity
  - Adopt both
  - Yields prevalence range
    - 3-6%

Clemens et al J Urol 2005
Berry et al, J Urol May 2010

RICE Study Def^{n}

- High Sensitivity 81%
  - Pain in lower abdomen or pelvis
  - Urgency to void
  - Urgency due to pain, pressure, discomfort
  - Frequency x 10 or more
- High Specificity 83%
  - Pain in lower abdomen or pelvis
  - Increasing pain with bladder filling
  - Urgency to void
  - Urgency due to pain, pressure, discomfort
  - Frequency x 10 or more
  - Antibiotic resistant UTI
  - No previous treatment for endometriosis

1. *Clemens et al*
2. *Berry et al, J Urol May 2010*

Diagnosis

- Remains a one of exclusion?
- The diagnosis of a confusable disease does not exclude the diagnosis of BPS/IC

Scoring systems

- O'Leary Sant
  - ICSI (Symptom index)
  - ICPI (Problem index)
  - 4 questions each
  - Validated
  - Reliable
  - Detects symptom change

1. *O'Leary, Sant et al Urology 1997*
2. *Lubeck et al Urology 2001*

Scoring systems

ICSI

- Strong need to urinate
- Urinate within 2 hrs
- Nocturia
- Pain or burning

ICPI

- Frequency
- Nocturia
- Urgency
- Pain or burning

During the last month

1. *O´Leary, Sant et al Urology 1997*

Associations

- IBS
- SLE
- Vulvodynia
- Chronic Fatigue Syndrome
- Migraines
- Asthma
- Sensitive skin
- Abuse
- GORD

1. *Clemens et al J Urol 2005*
2. *Sant & Hanno Urology 2001*
3. *Aligiri et al Urology 1997*
4. *Peters et al J Urol 2007*
5. *Buffington J Urol 2004*
6. *Kang et al Neuro & Uro 2013*

Management

- Aims & principles
- Avenues
  - Psychological support
  - Behavioural modification
  - Physical therapy
  - Pharmacotherapy
  - Surgery

Aims

- Palliate v cure
- Reduce pain as first priority
- Prevent flares
- Delay progression

Principles

- Multimodal
- Early
- Patient committed
- Regular follow up
- Holistic

Psychological Support

- Reality check!
- Psychology
- Support groups
- Patient education
- Cognitive therapy

Behavioural Modification

- Smoking
- Bladder re-training
- Dietary
  - Large meals
  - Citrus fruits
  - Caffeine
  - Alcohol
  - Carbonated drinks

1. *Shorter et al J Urol 2007*
2. *Chancellor et al Urology 2004*

Pharmacotherapy

- Oral
  - Analgesia
  - Hydroxyzine
  - PPS
  - Amytriptiline
  - Cyclosporin A
  - Antibiotics

Pharmacotherapy

Agent	Dose	Response	Level of Evidence	Grade
Analgesia			2b	C
Hydroxyzine	25-50mgs nocte	90%	1b	A
PPS	100-200mgs bd	50%	1a	A
Amytriptilin	25-100mgs nocte	60%	1b	A
Cyclosporin A	1.5mg/kg bd	80%	1b	A
Antibiotics		50%	1b	A

Limited Efficacy

- Cimetidine (B)
- Prostaglandin (C)
- L-Arginine (C)
- Anticholinergics (C)
- Duloxetine (C)
- Clorpactin (C)

Not Recommended

Pharmacotherapy

- Intravesical
  - LA
  - PPS
  - Heparin
  - Hyaluronic acid
  - Chondroitin sulphate
  - DMSO

Pharmacotherapy

Agent	Response	Level of Evidence	Grade
LA	80%	3	C
PPS	80%	1b	A
Heparin	80%	3	C
Hyaluronic Acid	70%	2b	B
Chondroitin Sulphate	90%	2b	B
DMSO	55 - 90%	1b	A

Resiniferatoxin

Euphorbia resinifera

The Scoville Scale

	5000 SHU
	2.2 million SHU
	16 billion SHU

Resiniferatoxin

Meta-analysis
7 Trials
n = 355
Significant reduction in
Pain score (p=0.05)
Significant increase in
Cystometric capacity (p=0.006)

1. *Guo et al Plos one Dec 2013*

Surgery

- Hydrodistension
- TUR ulcer, coagulation and LASER
- Botulinum toxin
- Radical cystectomy
- Trigone sparing cystectomy
- Sub-trigonal cystectomy

Surgery

- Patient Selection
  - End stage
  - Treatment refractory
  - Significant reduction in Q of L
  - Psychologically able to consent
  - Realistic expectations

Botulinum Toxin A

- Controversial (almost !)
- Increasing reports
- Trigonal may be the key
- AUA : 5th line therapy
- Current Level of evidence : 1b

Pinto et al Eur Urol 2010 & 2012
Kou et al Int J Clin Pract 2013
Chung et al Pain Phys 2012
Smith et al Urology 2004
Giannantoni et al Eur Urol 2012

Future ?

- Gabapentin
- Pre-gabalin
- Suplatast tosilate
- Quercetin
- Rec human nerve growth factor

Summary

- Accepted definition and classification
- Unknown aetiology
- Multimodal therapy
  - Reality
  - Patient support
  - Behavioural therapy
  - Pharmacotherapy cocktail
  - Surgery as last resort

- Thank you