



Interstitial Cystitis/Bladder Pain Syndrome

Definition

Interstitial cystitis/bladder pain syndrome (IC/BPS) is defined as chronic pain, pressure, and discomfort (with a duration of more than 3 months) associated with urinary urgency or frequency without any readily explainable cause (infection, neoplasm, or structural abnormality).

Clinical Findings

Clinical findings include pain, discomfort, and unpleasant symptoms, perceived to be related to the bladder (localized to suprapubic, urethral, vaginal, and perineal areas and associated with bladder filling and/or emptying), and urinary frequency and urgency. Common findings include frequent low-volume voiding when awake, nocturia, and cystoscopic evidence of glomerulations (submucosal petechial hemorrhages) or mucosal lesions or ulcers (Hunner's lesions).

Epidemiology

IC/PBS is more prevalent in women than in men (estimates range from a ratio of 2:1 to 10:1). Self-report studies indicate diagnosis of IC/BPS in 800–900 per 100,000 women; symptoms are present in 0.5–11% of women depending on the definitions used. IC/PBS is most commonly diagnosed in the fourth decade of life, but symptoms can predate diagnosis by many years. Symptom flares are common, with intensification of symptoms for hours, days, or weeks. Common comorbidities include fibromyalgia, irritable bowel syndrome, headaches, allergies, rheumatological disorders, vulvodynia, depression, and anxiety disorders.

Pathophysiology

The pathophysiology of IC/BPS is still incompletely understood and is likely to be complex and multifactorial. Theories include, but are not limited to, the following: an incomplete barrier lining of the bladder, abnormal mast cells, other immunological factors, a hypersensitive nervous system (peripheral/central components), genetic factors, and pelvic floor muscle spasm.

Diagnosis

Careful patient history, physical examination, and laboratory tests are necessary to rule out confusable diagnoses. Useful measures include urinalysis or urine culture, post-voiding residual measures, and cytology if there is a history of smoking. Voiding symptoms and pain scores should be gathered as part of the history and to assess response to treatment. Cystoscopy and urodynamics are useful when diagnosis is in doubt.

Management Options

Conservative options include education, behavioral modification, stress management, low-impact exercise (walking, stretching, or yoga), and manual physical therapies (including focused pelvic physiotherapy and/or trigger point release). Systemic medical therapies include antihistamines, pentosan polysulfate, cyclosporine A, opioids, and neuropathic pain medications (gabapentinoids or tricyclic antidepressants). Intravesical medical therapy includes dimethylsulfoxide (DMSO), lidocaine, and heparin. Surgery includes hydrodistension and fulguration of mucosal lesions. Other options include neurostimulation (for frequency/urgency), intradetrusor botulinum toxin injection, pain management interventional procedures (anesthetic injections), cystoplasty, urinary diversion, and cystectomy.

Interventions that are not recommended except in studies include long-term antibiotics; systemic corticosteroids; high-pressure, long-duration hydrodistension; and intravesical resiniferatoxin or bacille Calmette-Guerin.

References

- [1] Fall M, Baranowski AP, Elneil S, Engeler D, Hughes J, Messelink EJ, Oberpenning F, Williams ACdeC. EAU guidelines on chronic pelvic pain. *Eur Urol* 2010;57:35–48.
- [2] Hanno PM, Burks DA, Clemens J, Dmochowski RR, Erickson D, Fitzgerald MP, Forrest JB, Gordon B, Gray M, Mayer RD, Newman D, Nyberg L Jr, Payne CK, Wesselmann U, Faraday MM. Diagnosis and treatment of interstitial cystitis/bladder pain syndrome. American Urological Association (AUA) guideline. American Urological Association; 2011. Available at: http://www.auanet.org/content/guidelines-and-quality-care/clinical-guidelines/main-reports/ic-bps/diagnosis_and_treatment_ic-bps.pdf.