

Update on Diagnosis of Interstitial Cystitis

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Understanding the overlapping features of various urogynecologic conditions is important in order to diagnose interstitial cystitis/painful bladder syndrome. Prompt and appropriate treatment is critical to relieve symptoms and improve the quality of life for your patients.

Interstitial cystitis/painful bladder syndrome (IC/PBS) is a chronic condition characterized by urinary frequency, urgency, and pelvic pain in the absence of other identifiable pathology.¹ Initial identification of IC/PBS is challenging, as patients may experience a range of symptoms. This is particularly true early in the course of the disease when patients may experience only 1 or 2 symptoms, which may occur only intermittently.¹

Later on in the course of the disease, the chronic and recurring symptoms of IC/PBS can become severe, even debilitating for many patients, and can have a pronounced negative impact on quality of life.² Although it was once considered rare, based on the prevalence of patients with severe disease, recent data suggest IC/PBS may be more common than previously thought.²

The symptoms of IC/PBS overlap with a wide range of other disorders, including

chronic pelvic pain syndrome, overactive bladder (OAB), and urinary tract infection (UTI).³ IC/PBS can coexist with these other conditions, leading to delays in diagnosis and ultimately a delay in proper treatment for the patient. It is therefore important to understand the overlapping features of IC/PBS and these other conditions to better facilitate prompt and appropriate treatment.

PATHOGENESIS

The etiology of IC/PBS is not completely understood. Several theories have been proposed. Because chronic inflammation is characteristic of IC/PBS, an infection etiology frequently has been suggested. However, despite many attempts to find evidence of infectious organisms in IC/PBS, including the use of techniques to isolate DNA or RNA from bacteria or viruses, no such evidence has been convincingly demonstrated or reproduced.⁴

One theory on the etiology of IC/PBS involves a defect in the mucous layer that coats the bladder epithelium.⁵ It is proposed that this layer maintains a protective barrier between the epithelium and the urine, which is toxic to cells. In IC/PBS, the mucous layer is thought to lose its protective capacity, after which urine is able to diffuse into the bladder epithelium. Epithelial contact with toxins or irritants in the urine causes a cascade of inflammation, tissue damage, and neural activation.⁵

A widely accepted theory has been proposed that outlines a multifactorial etiology for IC/PBS. In this model, an initial injury to the bladder epithelium from a UTI, childbirth, or other source does not heal properly in some patients—perhaps due to a bio-

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chemical abnormality. The epithelial damage leads to increased permeability to cytotoxic factors in the urine, as well as to chronic neurogenic up-regulation and to chronic inflammation.⁶

SYMPTOM OVERLAY WITH COMMON CONDITIONS

Chronic pelvic pain (CPP) is generally defined as pain that (1) localizes to the anatomic pelvis, the anterior abdominal wall at or below the umbilicus, the lumbosacral back, or the buttocks; (2) is of sufficient severity to lead to medical care or functional impairment; and (3) lasts for 6 months or longer.⁷ The bladder is a frequent source of pain in CPP.

IC/PBS should be considered in any woman presenting with CPP, as undiagnosed IC/PBS may lead to unnecessary and unsuccessful diagnostic or therapeutic surgeries. ACOG guidelines on CPP report that 38% to 85% of women with CPP may have IC.⁷

OVERACTIVE BLADDER

OAB is characterized by urinary urgency with or without urge urinary incontinence and usually with frequency and nocturia in the absence of obvious pathology. Like IC/PBS, the pathophysiology of OAB is not clearly established but may involve altered nerve activity.

IC/PBS and OAB may be differentiated by the presence of pain in IC/PBS; however, not all patients with IC/PBS report pain, especially in early, mild IC/PBS.³ OAB patients are more likely to report true urgency—characterized by a sudden and compelling desire to void that cannot be easily deferred—and voluntary voiding out of fear of incontinence. With IC/PBS, urgency is more often associated with pain, and patients may void frequently to obtain pain relief.

URINARY TRACT INFECTIONS

UTIs are common among women; more than half of all women will experience a UTI during their lifetime. Characteristic symptoms of a UTI include suprapubic pain, urinary frequency, urgency, and dysuria. Diagnosis of a UTI is confirmed by the presence of bacteriuria in a voided mid-stream sample. Recurrent UTI may be defined as a second episode occurring within

6 months of an initial UTI.⁸ In the past, significant bacteriuria was defined as 10^5 colony-forming units (CFU)/mL; however, current guidelines recommend a threshold of 10^3 CFU/mL.⁸

Patients who present with repeated urinary tract symptoms are often given a diagnosis of recurrent UTI based on symptoms alone and treated empirically with antibiotics. As IC/PBS often involves episodic symptom flares involving UTI-like symptoms, these patients may receive multiple courses of antibiotics over many years before a proper diagnosis is established.

DIAGNOSIS OF IC/PBS

Although IC/PBS is more commonly recognized now than in the past, it is often not considered early enough in the diagnostic process. For women who present with any or all of the symptoms of urinary urgency, frequency, nocturia, pelvic pain, dysuria, or dyspareunia, IC/PBS should be considered. A typical work-up should include a thorough history, physical examination, and laboratory studies including urinalysis and urine culture.

Diagnostic Tools

Symptom surveys can be helpful in screening for symptoms of IC/PBS. Two validated and commonly used surveys are the Pelvic Pain and Urgency/Frequency questionnaire and the O'Leary-Sant symptom and problem indexes.³ Optional diagnostic tools include the potassium sensitivity test (PST) and the anesthetic bladder challenge (ABC), both of which may help to localize the source of pain to the bladder.

Although the use of the PST and ABC as aids to diagnose IC/PBS is debated, they continue to be widely used in clinical practice. Cystoscopy with hydrodistention may aid in the diagnosis of IC/PBS; however, it is not specific or highly sensitive for this condition.

MANAGEMENT OF IC/PBS

Patient education is an important component in the successful management of IC/PBS. Patients need to know that IC/PBS, unlike UTI, is a chronic disease with no cure and that effective symptom relief may take weeks or even months to achieve. A regular schedule of follow-up visits should be

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planned to allow for reassessment of symptoms and to provide the patient with clear goals for symptom improvement. It is important to enlist the patient as a partner in her own care, as continued patient adherence to therapy is necessary for optimal treatment outcomes.

A multimodal therapy approach has become the standard in the treatment of patients with IC/PBS, combining oral and intravesical pharmacologic agents with diet and lifestyle modification and other nonpharmacologic options.

Therapy should be tailored to the individual, based on the severity of her symptoms. Dietary modification can help reduce symptom flares produced by foods high in acid, spices, or potassium. Reducing caffeine and alcohol consumption, as well as cigarette smoking, can minimize the symptoms of IC/PBS.

The only therapies that have received FDA approval for IC/PBS are oral pentosan

polysulfate sodium (PPS) and intravesical dimethyl sulfoxide. PPS has been shown in multiple clinical trials to improve the symptoms of IC/PBS.

Other agents are often used off-label to treat the symptoms of IC/PBS. Antihistamines can help relieve allergy-related flares. Tricyclic antidepressants such as amitriptyline have analgesic and antihistamine effects, as well as anticholinergic effects that can reduce frequency. Intravesical instillation of a variety of agents, often combined into a cocktail of local anesthetics and exogenous replacements for the glycosaminoglycan barrier, are effective for reducing symptoms at the outset of therapy and especially helpful for symptom flares in many patients.³

In patients with pelvic floor dysfunction, a comprehensive pelvic floor physical therapy program can be helpful. Patients may also benefit greatly from counseling regarding stress reduction and smoking ces-

Coding for Interstitial Cystitis

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This article discusses the management of several urinary tract symptoms. The following ICD-9 codes are applicable:

- 595.0** Acute cystitis (urinary tract infection)
- 595.1** Chronic interstitial cystitis
- 625.0** Dyspareunia
- 625.9** Pelvic pain
- 788.1** Dysuria, Painful urination
- 788.31** Urge incontinence
- 788.41** Urinary frequency
- 788.42** Polyuria
- 788.43** Nocturia

Although there is not a specific code for an overactive bladder, you could use the code **788.42** Polyuria to document this symptom.

The management of this condition would be coded using the CPT codes for either a new patient or established patient encounter. If it is a new

patient encounter, then use either **99204** or **99205**. For the established patient, you would likely use either **99213**, **99214**, or **99215**, as time may be the determining factor in choosing the correct code.

Counseling, as defined in the *Current Procedural Terminology* book, includes "Instructions for management (treatment) and/or follow-up, Importance of compliance with chosen management (treatment) options, [and] Risk factor reduction." If you use time, be certain to document how much time you spent with the patient and what you discussed. This may be all you are doing in your follow-up appointments, but it is still clinician work.

The CPT code for a patient who smokes is:

- 305.1** Tobacco use disorder or Tobacco dependence.

Philip N. Eskew Jr, MD, is past member, *Current Procedural Terminology (CPT)* Editorial Panel; past member, *CPT* Advisory Committee; past chair, ACOG Coding and Nomenclature Committee; and instructor, *CPT* coding and documentation courses and seminars.

sation techniques, as well as participation in local or online support groups.

CONCLUSION

IC/PBS has many clinical features in common with other urogynecologic conditions. It is especially important to consider IC/PBS when evaluating patients with CPP, OAB, or recurrent UTIs.

Evidence suggests that in many cases IC/PBS may be misdiagnosed or may exist concurrently with these other conditions. In patients diagnosed with IC/PBS, multimodal therapy can provide effective symptom relief. The ultimate goal in managing IC/PBS is facilitating a prompt and accurate diagnosis and providing patients with therapeutic options that focus on symptomatic relief and improving quality of life.

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REFERENCES

1. Butrick CW. Interstitial cystitis and chronic pelvic pain: new insights in neuropathology, diagnosis and treatment. *Clin Obstet Gynecol.* 2003;46(4):811-823.
2. Clemens JQ, Link CL, Eggers PW, Kusek JW, Nyberg LM Jr, McKinlay JB; BACH Survey Investigators. Prevalence of painful bladder symptoms and effect on quality of life in black, Hispanic and white men and women. *J Urol.* 2007;177(4):1390-1394.
3. Dell JR, Mokrzycki ML, Jayne CJ. Differentiating interstitial cystitis from similar conditions commonly seen in gynecologic practice. *Eur J Obstet Gynecol Reprod Biol.* 2009;144(2):105-109.
4. Al-Hadithi HN, Williams H, Hart CA, et al. Absence of bacterial and viral DNA in bladder biopsies from patient with interstitial cystitis/chronic pelvic pain syndrome. *J Urol.* 2005;174(1):151-154.
5. Parsons CL, Boychuk D, Jones S, Hurst R, Callahan H. Bladder surface glycosaminoglycans: an epithelial permeability barrier. *J Urol.* 1990;143(1):139-142.
6. Evans RJ. Treatment approaches for interstitial cystitis: multimodal therapy. *Rev Urol.* 2002;4(Suppl 1):S16-S20.
7. ACOG Committee on Practice Bulletins—Gynecology. ACOG Practice Bulletin No. 51. Chronic pelvic pain. *Obstet Gynecol.* 2004;103(3):589-605.
8. Drekonja DM, Johnson JR. Urinary tract infections. *Primary Care.* 2008;35(2):345-367.

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