Interstitial Cystitis/Painful Bladder Syndrome:  

What are the treatment options?  

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Introduction

Interstitial Cystitis/Painful Bladder Syndrome (IC/PBS) is defined as urinary frequency, urgency, and pelvic pain without any identifiable cause. Once diagnosed, it may take weeks to months to achieve symptom relief. At present, there is no cure.¹

The impact of IC/PBS is significant: increased stress, loss of sleep, decreased quality of life, work limitations and lost wages, and higher medical costs to the sufferer and the health care system.²

There are several theories about the causes of IC/PBS. Most involve some form of inflammation or damage to the bladder lining, making the bladder irritated by urine as it fills and stretches.¹,³

The main goals of treatment are to increase daily functioning and improve quality of life.³ New guidelines, developed by the American Urological Association, outline the steps in managing IC/PBS based on current research.⁴ Most of the suggested treatment options are discussed below.

Treatment Options

Stress management:

Identification and treatment of depression and anxiety disorders reduce the impact of IC/PBS. Stress reduction strategies may include relaxation tapes, sitz baths, biofeedback (learning how to control breathing, pulse, and blood pressure), exercise, and Cognitive Behavioral Therapy.³

Bladder training:

The concept of bladder training is to hold urine for a reasonable length of time, and gradually increase this time period. For example, one might begin by urinating every hour or two. Each week, the length of time can be increased by 15 minutes so that after a month the interval may have reached 2-3 hours. This could have a significant impact on social functioning.⁵

Bladder irritants:
Certain foods and beverages, (plus smoking!) have been found to increase bladder irritation. These include: alcohol, caffeine, acidic foods (citrus, tomatoes), spicy foods, artificial sweeteners (diet pop), foods rich in potassium, and MSG. Bladder-friendly diets have been developed, and individuals may discover that certain foods cause them more bladder pain or urinary frequency. An elimination diet can be used to find out what an individual’s food triggers are.\(^1,3,6\)

**Pelvic physical therapy:**

Pelvic physical therapy is done by a specially trained physiotherapist. Therapy includes stretching exercises (both internal and external), massage, home exercises, and biofeedback to learn how to control relaxation of the pelvic floor muscles.\(^1,3\)

**Oral medications:**

Many medications have been tried for the treatment for IC/PBS, but few of them have proven effective. The only oral medication currently approved by the FDA for treatment of IC/PBS is pentosan polysulphate sodium (PPS; brand name: Elmiron). It works by coating the bladder, preventing irritation from urine against the bladder lining. It may take from 4 weeks up to 6 months for full effect.\(^3,6\)

Anti-histamine medications, such as cimetidine and hydroxyzine, decrease inflammation in the bladder.\(^4\) Anticholinergic medications like oxybutinin (Ditropan) decrease muscle spasms in the bladder wall.\(^7\) Amitriptyline is an anti-depressant medication, commonly used to treat neuropathic pain. Whether any these medications are effective for IC/PBS is still in debate.\(^3,6,8,9\)

**Intravesicular medications:**

Intravesicular medications are put directly into the bladder for a short period of time using a urinary catheter. Many medications have been studied for this use, but there continues to be debate surrounding their effectiveness. Dimethylsulfoxide (DMSO) is the only intravesicular therapy currently approved by the FDA for IC/PBS, although little is known about how it works.\(^5,7\) Lidocaine is a local analgesic, often mixed with bicarbonate before instillation.\(^7,10\) Heparin belongs to a class of compounds called glycosaminoglycans (GAGs). Other GAGs include chondroitin and hyaluronan. These medications coat the bladder lining and prevent irritation from urine.\(^3,11,12\) PPS, described above, can be used both as an oral and intravesicular medication. Intravesicular PPS is helpful during the beginning of oral PPS treatment, and can be discontinued once symptoms are under control.\(^13\)

**Hydrodistension:**
Hydrodistension involves filling the bladder with enough water to stretch the bladder wall. It is thought to be more effective when used in combination with bladder training, as described above.5,14

**TENS/Neuromodulation:**

Transcutaneous Electrical Nerve Stimulation (TENS) uses electric current across the skin to stimulate the nerves that produce and that mask pain, theoretically blocking the pain signal.3 Sacral neuromodulation is like an implanted version of TENS. After a 4-7 day trial with a temporary device, a permanent implant is placed into the upper buttock area.15,16

**Botox:**

Botox-A injections, directly into the muscle of the bladder wall, cause relaxation of the muscle and may help people who fail other therapies.6,17

**Surgery:**

Surgery is the last resort. This can include enlarging the bladder using intestine, cutting the nerves to the bladder, or complete removal of the bladder.6,3 The most common complication is urinary retention (resulting in the need for self-catheterization).18

**Summary:**

IC/PBS is a painful and potentially disabling condition with significant physical, emotional, and financial costs. There is no single agreed-upon approach to treatment, nor does it seem that one treatment fits all. It is helpful to keep in mind that the goals of treatment are pain management, function, and quality of life. An individualised combination of the treatments described above can give people the best chance to feel better and improve their quality of life.

**References**


Bio

Dr. Kathryn Rutherford is a resident in family medicine at Queen’s University in Kingston, Ontario. She completed her medical degree at Queen’s University and has a Bachelor of Science with Honours from the University of Ottawa. She is interested in the management of chronic pain from a generalist perspective, including the integration of diet, exercise, and stress management into comprehensive pain management strategies. Her other interests include community health, addiction medicine, and the issues surrounding management of chronic pain in the acute care setting.