Interstitial Cystitis

A Naturopathic Approach
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Interstitial cystitis (IC) is a condition of the bladder that affects millions of women, men, and children worldwide. Also known as bladder pain syndrome (BPS), IC is a chronic inflammatory condition that results in recurring discomfort or pain in the bladder and the surrounding pelvic region. Other symptoms may include increased pressure in the pelvic region, increased urgency, and/or increased frequency to urinate.[1]

Diagnosis of IC
The American Urological Association defines IC/BPS as follows:

“An unpleasant sensation (pain, pressure, or discomfort) perceived to be related to the urinary bladder, and associated with lower urinary tract symptoms of more than six weeks duration in the absence of infection or other identifiable cause.”[2]

As a result of the diagnosis being often that of exclusion, some women have undergone unnecessary hysterectomy in an attempt to reduce their pain before receiving the correct diagnosis of IC. It is reported that the average woman will see five to seven doctors before receiving the correct diagnosis of IC. Men seeking diagnosis are often mislabeled as prostatitis patients.[3]

A urine sample will often be done first to look for a urinary tract infection, due to the overlapping symptoms between IC and bladder infections. Sometimes an ultrasound will be done to rule out abnormalities in the bladder, urethra, and kidneys. Usually, these tests will come back negative in cases of IC. Sometimes, the patient will be referred to a urologist for a cystoscopy to look at the inside walls of the bladder. Changes to the wall of the bladder are common in cases of IC. Cytoscopic findings of the bladder wall
in IC may include ulcers called Hunner’s ulcers or nonulcer hemorrhages referred to as “glomerulations”.\[2]\ Bladder biopsy can also help with confirmation and classification.

Thus, the diagnosis of IC is based on:
I. Symptoms (bladder pain, urinary urgency, frequency);
II. Evidence of supportive bladder pathology on cystoscopy; and
III. Exclusion of other possible diagnoses.\[1]\n
**Classification of IC**
The European Society for the study of IC/BPS suggests an optimal IC classification system based on cystoscopic findings. They recommend grading IC from level 1 to level 3:
1. Normal;
2. Glomerulation/nonulcer IC; or
3. Hunner’s ulcers, otherwise known as “classic” or ulcerative IC.\[4]\n
**Causes**
IC is a disease of undetermined cause; however, inflammation is thought to be a key player. Many studies have demonstrated an increase in mast cells within the detrusor muscle of the bladder, as well as prominent plasma cells in the bladder tissue. A recent study demonstrated evidence that IC could be part of a systemic IgG4-related disease.\[5]\ Until a universal etiology has been established, IC remains known as a chronic inflammatory pain disorder. The most-recently discussed pathologic abnormality used to explain IC is a defect in the glycosaminoglycan (GAG) layer that protects the bladder cells from urine.\[9]\n
It is interesting to note the association of IC with other conditions. One-third of patients with IC have irritable bowel syndrome (IBS), a functional bowel disease with inconsistent bowel habits and/or abdominal pain and discomfort. IC patients have also been diagnosed with other conditions such as fibromyalgia, chronic fatigue syndrome, allergies, and Sjogren’s syndrome—which, interestingly enough, all share an immune-mediated etiology.\[6]\ There is also evidence linking nonceliac gluten sensitivity in patients with IC.\[7]\
Conventional Treatment Strategies

Conventional treatment for IC patients, as recommended by the American Urological Association, is broken down into six tiers. First-line treatments include relaxation techniques, behavioural modification, and pain management. Second-line treatments include physical therapy, oral therapies, and intravesical therapies. More invasive and further-down-the-line therapies include surgery, botulinum toxin injections, neuromodulation, and stronger oral pain therapies.[8] Elmiron (pentosan polysulfate) and Elavil (amitriptyline) are the most common pharmaceuticals prescribed for IC.

Naturopathic Treatment Strategies

Diet

Diet recommendations should be considered as a first-line treatment for IC. More than 50% of IC patients observe aggravation of their symptoms with acidic foods such as acidic beverages, caffeine, alcohol, chocolate, tea, soda, spicy food, and artificial sweeteners. Avoidance of these foods may be very helpful.[9]

As IC is associated with IBS in some patients as well, patients observe that once their IBS symptoms resolve, their IC symptoms subside as well. An elimination diet to determine which foods or fluids flare their symptoms (both bladder and/or bowel) would be recommended. A food-sensitivity test is another option to determine these offending agents.

Stress

Stress is noted in the research as the “most significant factor that aggravates the symptoms of IC.”[9] Addressing stress management such as discussing lifestyle changes, work hours, relationships, exercise, meditation, etc. is essential. Psychological and emotional supports are crucial for these patients. Often, the IC symptoms themselves can create stress such as chronic bladder pain, increased urinary frequency, and sleep loss due to nocturia; thus, promoting remission of IC symptoms as well as addressing stress management is important for helping the patient achieve emotional and psychological wellbeing.[9]

GAG Substitute: Chondroitin Sulfate

As mentioned in the Causes section above, the most common pathologic finding is the defect in the GAG layer (the cells which line the bladder). Thus, GAG-layer restoration is an important treatment regimen for IC. Chondroitin sulfate is a glycoprotein and is a major part of the GAG layer. Some RCTs confirm that chondroitin sulfate is favourable for replenishing the GAG layer in IC.[10] Great dietary sources of GAGs include bone broths and shellfish.
Mast-Cell Mediator: Quercitin
Studies have demonstrated a consistent increase in mast cells in patients with IC. Quercitin, a naturally occurring substance that inhibits the release of histamine from mast cells, was studied. A small study was done which found that 57% of patients who took 500 mg of quercitin twice a day had a significant decrease in pain symptoms.[11]

Physical Therapy, Acupuncture, TENS, and Biofeedback
Many IC patients have tense pelvic-floor muscles, which can be contributing to the worsening of their symptoms. Physical therapy, acupuncture, TENS, and biofeedback all work to release the tight muscles and trigger points in the pelvic area. Many studies highlight the importance and effectiveness of these therapies.[11]

Nervines
As there is a lot of emotional and psychological stress, both causing and caused by IC, prescribing herbs that calm the nervous system can be helpful. Kava-kava (*Piper methysticum*) is an example of a well-studied nerveine as well as a bladder anesthetic.[12]

Conclusion
The use of a multimodal and individualized approach is essential in the treatment of IC, as the etiology of this condition has not been fully elucidated. Addressing stress, diet modifications, physical therapy (including acupuncture), and the use of certain supplements/herbs have all shown positive outcomes. Further research in the etiology is still required to promote more clinical confidence in the area of treating this condition.

References
3. IC Awareness Month: http://www.icawareness.org