

Therapy & Co-morbid Disorders Update

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IC Therapy Based on Pathophysiology

- Increased bladder wall permeability
- Autonomic nervous system dysfunction
- Mast cell activation
- Adrenal - Pituitary gland dysfunction
- Somatic stress response
- Emotional stress response

Increased Permeability

- Barrier improvement
 - Pentosanpolysulfate (Elmiron)
- Irritant avoidance
 - Diet modification
 - Calcium glycerophosphate (Prelief)
 - Antacids (TUMS)

Autonomic Dysfunction

- Tricyclic antidepressants
 - Amitriptyline (Elavil)
 - Nortriptyline (Pamelor)
 - Doxepin (Sinequan)
- Alpha ₁ blockade
 - Tamsulosin (Flomax)
 - Alfusocin (Uroxatral)
- Alpha ₂ agonists
 - Guanfacine (Tenex)

Mast Cell Activation

- Antihistamines - H₁ or H₂?
 - Diphenhydramine (Benadryl)
 - Hydroxyzine (Atarax)
 - Cimetidine (Tagamet)
 - Ranitidine (Zantac)
 - Famotidine (Pepcid)
- Cromolyn

Autonomic Dysfunction

- Antimuscarinics
 - Oxybutynin (Ditropan, Oxytrol)
 - Tolteridone (Detrol)
 - Solifenacin (Vesicare)
 - Darifenacin (Enablex)
 - Trospium (Sanctura)
 - Hyoscyamine (Levsin, Levsinex)

Analgesics

- Phenazopyridine (Pyridium)
- Methylene blue + Salicylic acid (Urelle, Prosed)
- Gabapentin (γ -aminobutyric acid) (Neurontin)
- Pregabalin (Lyrica)
- Narcotics
 - Pills (Tramadol)
 - Patches
 - Pumps

Associated Responses

- General exercise
- Pelvic floor physical therapy
- Stress management
- Psychological therapy
- Information/education
- Support system
- Attitude

Procedures

- Cystoscopy and hydrodilation
- Instillations
 - Heparin
 - DMSO
 - Bicarbonate
 - Bupivacaine
 - Cortisone

Procedures

- Injections into the bladder
 - Botulinum toxin
 - Bupivacaine
- Neuromodulation (Interstim)
- Nerve blocks
 - Sacral
 - Pudendal

Things to Avoid !



- Chlorpactin (sodium oxychlorosene)
- Argerol (silver proteinate)
- Bladder removal

BEWARE of Misdiagnosis or Underdiagnosis



- Carcinoma *in situ*
- Endometriosis
- Inflammatory bowel disease
- Gynecologic/ Prostate cancer

Co-morbid disorders

- Irritable bowel syndrome
- Fibromyalgia
- Vulvodynia
- Endometriosis
- Chronic Fatigue Syndrome

Therapy Formats

- Incremental
- Shot gun
- Custom fit
- Poly-pharmacy
- Communication
- Wax & Wane
- Myth of “Inevitable Progression”