Chronic Pelvic or Urogenital Pain Conditions: Overview, Assessment and Treatment Options

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Disclosures, Terminology

• Nothing to disclose

• Terms/Abbreviations:
  – Vulvodynia/Vulvar Vestibulitis Syndrome (VVS)
  – Interstitial cystitis (IC)
  – Painful bladder syndrome (PBS)
  – IC/PBS
  – Trigger Point Injections (TPI)

• Focus on women’s issues
  – Conditions occur in men and children as well
Outline

• Introduction
• Patient evaluation
• Clinical conditions
  – Vulvodynia
  – Vaginismus
  – Pelvic congestion syndrome
  – IC/Painful bladder syndrome (PBS)
• Treatment
  – Trigger Point Injections
Chronic Pelvic Pain (CPP)

• 1 out of 9 women in the US has CPP

• More than 700,000 of these women have IC
Patient Presentation

- **Bladder dysfunction**
  - Overactive bladder
  - Urinary retention
  - Painful bladder syndrome

- **Sexual dysfunction**
  - Dyspareunia
  - Vaginismus
  - Vestibulodynia/vulvodynia

- **Musculoskeletal dysfunction**
  - High tone pelvic floor
  - Coccydynia/pudendal neuralgia
  - Sacroiliac joint dysfunction
  - Pelvic girdle dysfunction

- **Bowel dysfunction**
Physical Examination

• Abdominal exam

• Pelvic exam
  – Vaginal pH, vaginal culture
  – Palpate urethra
    • R/o diverticulum
  – Bimanual examination
  – Assess prolapse
  – Bladder scan
  – Assess pain with palpation

• Rectal exam
  – Levator tenderness
  – Men
    • Prostate exam
Levator examination
Levator Exam

- Palpate levator muscle complex
  - Assess degree of pain
  - Referred pain
  - Muscle spasticity
  - Trigger points
  - Check for pudendal neuralgia
# CPP- Differential Diagnosis

## Urologic pathology
- UTI
- Kidney stones
- IC/PBS

## Gynecologic pathology
- Pelvic congestion syndrome (pcs)
- Endometriosis
- Fibroids
- Ovarian cyst
- Pelvic inflammatory disorder
- Pelvic organ prolapse

## GI pathology

## Cancer (primary/metastatic)

## Fibromyalgia

## Neurologic pathology

## Orthopedic pathology
Vulvodynia

- Vulvar discomfort
  - Burning pain
  - No anatomic findings or neurologic disorder
  - Erythema
- Hypertonicity of levator muscles
- Pain must be present for >3 months.
- Affects approximately 2.4 million women
Anatomy of the Vagina

• Vaginal vestibule originates from the same embryonic tissue as the urethra and bladder
  – Has estrogen receptors.

• Anterior vaginal wall more densely innervated than posterior

• Vulvar nerve supply primarily by pudendal nerve branches
  – Sacral component

Arteries and Nerves of Perineum

- Perineal nerve
- Pudendal nerve
- Inferior hemorrhoidal nerve
- Posterior labial artery
- Dorsal artery of the clitoris
- Pudendal artery
Innervation of Vagina/Vulva

- **Vulva - A-delta fibers**
  - Thin, myelinated fibers
  - Respond to pressure and cold

- **Vagina, cervix, viscera: C-fibers**
  - Unmyelinated fibers
  - Respond to thermal, mechanical, chemical stimuli
  - Slower conduction → deep, burning pain
  - Usually silent
  - Respond to repeated stimuli

- Patient description can identify type of nerve fiber
Etiology of Vulvodynia

- Idiopathic/unknown
- Injury/irritation of nerves to vulva
- Abnormal response of vulvar cells to environmental factors

- Trauma (physical & psychological)
  - Childbirth
  - Surgery
  - Sports injury
  - Sexual abuse

- Psychological
- Behavioral
- Muscle spasms
- Genetic predisposition
Etiology of Vulvodynia

• Research does not support that emotional/psych disorders cause VVS

• Levator spasm
  – Which came first? VVS or spasm?
  – 80-90% of vulvodynia pts have hypertonic pelvic floor (Butrick, 2009)
Evaluation

- History
- Screening neurologic exam
- Pelvic exam
  - Visual inspection
  - Atrophy
  - Dermatologic Process
- Neurosensory Q-tip test
- Levator Exam

Cotton swab testing for vestibulodynia. The vestibule is tested at the 2-, 4-, 6-, 8-, and 10-o’clock positions. When pain is present, the patient is asked to quantify it as mild, moderate, or severe.
Levator Exam

- Vagina
- Pubic symphysis
- Arcus tendineus fascia pelvis
- Urethra
- Obturator internus muscle
- Puboccygeus muscle
- Iliococcygeus muscle
- Coccygeus muscle
- Piriformis muscle
- Anterior sacroccocygeus ligament
- Rectum
- Coccyx
Vaginismus

- Primary
- Secondary
  - Response to disease or relationship issues after non-painful sexual intercourse
- Introital muscle spasm
  - without levator pain
- Behavioral, involuntary response

Cycle of Vaginismus/Pain

- Pain with Penetration: Vaginismus
- Tightening of Pelvic Floor Muscles
- More Pain
- Fear of Pain with Penetration/Sex
- Anxiety/Altered Sexual Response/Dyspareunia

DJ Carrico, 2010
Vaginismus

• Studies show
  – Neurophysiologic changes in EMGs and pudendal nerve activity of pelvic floor muscles
  – CNS changes are likely present

• Psychosocial causes
  – Fear of pain with sex
  – Belief that sex is wrong or shameful
  – Traumatic early experiences

Pelvic Congestion Syndrome (PCS)

• Symptoms
  • Severe dull aching pain from pelvic varicosities
• More common in multiparous women
  – Ages 20-45 yrs
  – Affects 15% of women

• Multiparity may be associated
  – Hormonal influence → increased venous capacity by 60%
    → valve incompetence
  – Weight gain in pregnancy → chronic intermittent venous obstruction → valve incompetence
PCS: Etiology

• Endogenous Hormones
  – Estrogen can weaken the walls of veins
  – Most are premenopausal
  – Higher prevalence in cystic ovaries

• Venous Obstructing Abnormalities
  – Compression against the surrounding structures or bony pelvis
PCS: Pathophysiology

- Incompetent venous valves $\rightarrow$ Retrograde blood flow $\rightarrow$ Pooling of blood in pelvic veins
- Pain
  - Stretching of engorged vein
  - Mass effect on surrounding viscera or nerves
  - Thrombosis
PCS: Symptoms

- Dull continuous pelvic pain (more common on left side)
- Exacerbating factors
  - Sitting
  - Standing
  - End of Day
  - Intercourse

- Additional symptoms
  - Abdominopelvic tenderness
  - Swollen vulva
  - Dysmenorrhea
  - Lumbosacral neuropathy
  - Rectal discomfort/Urinary frequency
  - Depression/Lethargy
PCS: Exam

• External varices in the vulvar, pelvic, groin, perineal area, buttocks and lower extremities
  • Hemorrhoids

• Cervical motion tenderness

• Unusual tenderness over uterus, ovaries or in pelvis during bimanual exam
PCS: Ultrasound

- Key Findings
  - Dilated Ovarian &/or Pelvic Veins (>5 mm diameter)
  - Slow blood flow (<3 cm/s) or reversed flow in ovarian vein
  - Changes with Valsalva
    - Size of varices or variable waveform
  - Cystic ovaries

- Advantage:
  - Available, non-invasive
  - Can perform with Valsalva

- Disadvantage:
  - Operator dependent
PCS: CT Scan

- **Key findings**
  - Dilated ovarian veins
  - Tortuous pelvic varices
  - Cystic ovaries

- **Advantage:**
  - Operator independent
  - Detects compressive etiologies and vascular anatomical variations
  - Detailed survey of abd and pelvis

- **Disadvantage:**
  - Supine position (veins empty),
  - Radiation and IV contrast exposure
  - Cannot determine direction of flow
Axial CT Image

DILATED LEFT OVARIAN VEIN
PCS: Direct venography

- Key findings:
  - Dilated ovarian vein (>6 mm diameter)
  - Retrograde ovarian or pelvic venous flow
  - Numerous pelvic venous collaterals
  - Delayed/stagnant clearing of contrast
  - Filling of veins across the midline

- Advantage
  - Confirms diagnosis
  - Can treat

- Disadvantage
  - Invasive
  - Contrast and radiation exposure
MR Angiography

DILATED LEFT OVARIAN VEIN

PELVIC VARICES

Kim C Y et al. AJR 2009;193:W458-W463
PCS: Transcatheter embolotherapy

- Approach through neck or groin
- Ovarian veins are entered
- Use microcatheter to inject a mixture of Sclerosant and Gelfoam
- Metal coils placed throughout the main ovarian vein
- Internal iliac vein can be injected and sclerosed if needed

83% symptom relief at 48 months

Under fluoroscopy guidance, patients with PCS can be embolized by endovenous insertion of a metallic coil.

Photo courtesy of Boston Scientific.
Treatment images

Pre-treatment

Post-embolization
THE URINARY BLADDER

Symptoms and Diagnosis.—The symptoms are usually so clearcut and classic that the diagnosis can be suspected from the patient’s history.

The patient is usually a woman of the child-bearing age if the disease is of recent origin. If it is of many years’ standing, the woman may be older. She complains of pain in the bladder region. She will, if asked, point out the exact spots in the anterior abdominal wall, labia, urethra or other particular areas where the pain is referred. In a strikingly large number of cases, we have observed that this area corresponds to the location of the ulcer in the bladder. The patient will complain that her bladder is never free from an uncomfortable, dull, aching sensation and that pain is sharp and cutting and almost unbearable when the bladder becomes full. Emptying the bladder relieves the pain. The frequency of urination is marked both day and night. Often the nocturnal frequency is every 15-20 minutes. Nervousness, child-bearing, many diseases, automobile rides, train rides, constipation and fatigue aggravate the condition.
Cystoscopic Images of Bladder

- Symptoms of IC/PBS often do not correlate with cystoscopic findings
IC/PBS: Definition

• Presence of urgency, frequency, and pelvic pain symptoms
  – No identifiable pathology
Overlapping Conditions

- Share similar symptoms
- OAB differs
- Key difference is pain
Glomerulations

- Not pathognomonic for IC
  - During TURP, 20% with glomerulations
  
  - Present in
    - Classic IC symptoms
    - Normal hydrodistension
    - Asymptomatic patients

- Furuya, 2007 AUA
Hunner’s Ulcer

A medical entity as confusing, poorly understood, baffling etiologically, and taking up as much space as it does in the textbooks on urology should merit a few words from the psychiatrist. The diagnosis of the ‘bladder ulcer’—which gives bladder discomfort?—It makes a thoughtful physician wonder about the possibility of a mildly masochistic woman, i.e., destructive need in the female to suffer and “have trouble with” her genitourinary apparatus. Just
Hunner’s Ulcer

- Ulcerative IC
  - Urinary frequency, urgency, pelvic pain

- Ulcerative lesion on cystoscopy

- only occurs in 5-10% of the IC cases

Are Ulcerative (ULC-IC) and Non-Ulcerative IC/PBS (N-ULC-IC) Two Distinct Diseases?

• 2011 study
  – 178 N-ULC-IC, 36 ULC-IC, 425 controls

• N-ULC more co-morbidities
  – Fibromyalgis, migraines, TMJ, depression

• ULC-IC
  – older (median=63)
  – More frequency (day and night)
  – smaller bladder capacities

Etiology

- High tone pelvic floor dysfunction
- Urothelial dysfunction
  - Bladder lining susceptible to damage, unable to repair
  - Irritants "leak" through
- Defective GAG layer theory
  - Allows irritants to "leak" through
  - GAG layer replacers ease symptoms
- Leaky gut theory
  - Colon and bladder “cross talk”
  - Certain foods and fluids cause flares
Pelvic Floor Dysfunction

• Approximately 70%-87% of patients with IC have pelvic floor dysfunction\(^1,2\)

• Levator ani muscle myalgia source of chronic pelvic pain

\(^1\)Peters et al. Prevalence of Pelvic Floor Dysfunction in Patients with Interstitial Cystitis. Urology 2007
\(^2\)Moldwin R and Dell J, 2004
Mast Cells

• Bladder biopsies from 56 patients
  – Quantity, location, distribution and activation of mast cells
  – 31 with IC/PBS
    • 12 with Hunner’s lesions, 19 without
    • 3 with overactive bladder
    • 12 without bladder symptoms
• No difference between IC/PBS without Hunner's lesion and overactive bladder syndrome
• Elevated mast cells in detrusor and subepithelium in ulcerative IC/PBS
• 38% predictive value (poor)

Cycle of IC & Pelvic Pain

- Release of Substance P
- Activation of C-fibers
- Mast Cell Activation and Histamine Release
- More Tissue/Nerve Injury
- Bladder and Pelvic Pain
Central Up-Regulation

Parasympathetic
- Stimulates flow of saliva
- Slows heartbeat
- Constricts bronchi
- Stimulates peristalsis and secretion
- Stimulates release of bile
- Contracts bladder

Sympathetic
- Dilates pupil
- Inhibits flow of saliva
- Accelerates heartbeat
- Dilates bronchi
- Inhibits peristalsis and secretion
- Conversion of glycogen to glucose
- Secretion of adrenaline and noradrenaline
- Inhibits bladder contraction

Medulla oblongata

Yagus nerve

Chain of sympathetic ganglia

Solar plexus
• Possible familial type of IC?
  • Prevalence in first-degree relatives several times higher than general population
  • Stronger concordance among identical twins
  • Monozygotic pairs of twins at least one has disorder, other does not

• Environmental influences more significant

Reference to the work of Dr. John Warren--MAPPstudy
AUA IC/PBS Guidelines

• Guidelines based on review of literature and expert opinion
• Continued study and evolution
• Flexibility to accommodate patient needs and tailor treatment

• Download at www.auanet.org:
  http://www.auanet.org/education/guidelines/ic-bladder-pain-syndrome.cfm
IC/PBS - Diagnosis

• Basic history, physical exam, laboratory studies
  – Rule out confusables conditions (UTI, etc)
• Assess baseline voiding symptoms and pain levels
• Cystoscopy and UDS if indicated
• Potassium sensitivity not recommended
  – Inconsistent results, can cause IC flare
Diagnosis

• Pain history
  • Diet sensitive
  • Bladder filling
  • Location varies:
    • bladder, urethra, vulva, vagina, rectum, lower abdomen and back
  • Frequency and urgency

• Pelvic pain and Urgency/Frequency (PUF) and Interstitial cystitis symptom index-problem index (ICSI-PI) questionnaires
  • Not diagnostic
Complicated Cases

• May need additional testing
  • Incontinence, OAB, blood or pus in the urine, endometriosis, or GI conditions

• Urodynamic testing
  • Not standard
  • May cause flare
  • Patients may need bladder installation post-procedure

• Cystoscopy with hydrodistention under anesthesia
  • Find and treat Hunner's lesions
  • Rule out bladder cancer
  • May be therapeutic
Treatment
Multidisciplinary Team Approach

- Physical Therapists
- Nutritionists
- Rheumatologists
- Urologists
- NP/PA/Nurses
- Psychologists
- Acupuncturists
- Gynecologists/Primary Care
- Pain Clinics
- Patient
Treatment Options

• Local medications – vaginal/rectal suppositories
  • Muscle relaxants
  • Neuropathic pain agents

• Pelvic Floor Physical Therapy
• Pelvic floor trigger point injections
• Pudendal blocks
  • Long-acting anesthetic +/- steroids
• Intra-muscular Botox – 100 to 300 units
Treatments for Vulvodynia

• Sesame Oil + vitamin E

• Topical 100% Emu oil (contains Omega 3,6,9)

• New topical OTC cream
  – Studied in Switzerland. Research findings: http://www.vulvodyniatreatment.com/about-the-study
Treatments for Vulvodynia

• Gabapentin:
  – 100mg po tid; increase up to 300mg po tid
  – May increase to 1200mg po tid max

• Pregabalin:
  – 75mg po bid
  – May increase to 150 mg po tid

• Check www.clinicaltrials.gov for new trials

Treatments for Vulvodynia

- Antidepressants
- Amitriptyline or Nortriptyline
  - 10-25mg po qhs
  - May increase dose by 10mg up to bid
  - Do not exceed 100 mg at qhs
  - Need to wean off.
- Venlafaxine
  - 37.5mg po qam
  - May increase to 75mg po qam
  - Wean off

Treatments for Vulvodynia

• Topical 2% amitriptyline and 2% baclofen
  – Use pea-size amount bid to vestibule
  – 1/2 of 38 women were “much improved

• Fluconazole 150 mg once a week for 6 weeks then once a month for 6 months
  – Cyclic vulvodynia

• Antihistamines (ie: 10-25mg Hydroxyzine po ahs) or regular allergy meds

Dr. Paul Nyirjesy at Drexel Vaginitis Center—NVA News, Summer 2009
Pelvic Floor Physical Therapy

• >50% success rate

• Efficacy of behavioral therapy for vulvodynia
  • Graduated dilators with creams 3/7 (43%) cure
  • Cognitive-behavioral therapy 13/35 (37%) cure
  • Cognitive-behavioral therapy 1/1 (100%) cure
  • Electromyographic biofeedback 17/33 (51%) cure
  • Electromyographic biofeedback 15/29 (51%) improved

Treatments for Vulvodynia

• Surgical Intervention: Vestibulectomy
  • Excision of the inflamed vestibular epithelium
  • Success rates up to 95%
  • Sutures dissolve in 2 weeks
  • Post-op care involves topical estrogen, lidocaine, local massage and pelvic floor PT

• [http://www.cvvd.org](http://www.cvvd.org) Dr. Andrew Goldstein

Treatment for Sexual Discomfort

• Warm shower or bath prior to sexual activity
• Hypoallergenic lubricants with intercourse
  – water or silicone base
  – unscented
• Avoid allergens
  – creams and suppositories with propylene glycol
• Latex free/non-spermicide condom

Resources: Whole foods; Target; Amazon.com;www.s3safesexstore.com
Off-Label Therapy

• **Diazepam**
  – 5 mg vaginally up to q8 hours prn
  – 1 hour before intercourse.
  – 2mg/7mg/10mg dosing per pt’s response

• **Order diazepam tablet (cost-effective)**
  – Use “as directed”
  – Can crush tablet, mix with hypoallergenic lubricant or sesame/olive oil
  – Compound into a hypoallergenic vag. cream or glycerin suppository

• **May use rectally for rectal pain pts**

• **Check serum diazepam level in 1 month if daily use**
  – Note time of last dose on lab slip
  – Peak @ 1.5 h; elimin @ 46hrs

Treatment for Vaginismus

- Stop intercourse until other therapies are implemented
- Explore other sexual practices (ie: tantra)
- Refer to www.vaginismus.com for info/dilator kit
- Specialized pelvic floor PT
- Psychologist as indicated
- Guided imagery, perineal massage, dilators
- Pain Clinic for injections
Dilators for Vaginismus

SoulSourceEnterprises or www.vaginismus.com
IC/BPS
An unpleasant sensation (pain, pressure, discomfort) perceived to be related to the urinary bladder, associated with lower urinary tract symptoms of more than six weeks duration, in the absence of infection or other identifiable causes

**BASIC ASSESSMENT**
- History
- Frequency/Volume Chart
- Post-void residual
- Physical examination

**Confirm or Uncomplicated IC/BPS**
- Urinalysis, culture
- Cytology if smoking hx
- Symptom questionnaire
- Pain evaluation

**SIGN/SYMPTOMS OF COMPLICATED IC/BPS**
- Incontinence/OAB
- GI signs/symptoms
- Microscopic/hematuria/sterile pyuria
- Gynecologic signs/symptoms

**DX Urinary Tract Infection**

**TREAT & REASSESS**

**FIRST-LINE TREATMENTS**
- General Relaxation/Stress Management
- Pain Management
- Patient Education
- Self-care/Behavioral Modification

**SECOND-LINE TREATMENTS**
- Appropriate manual physical therapy techniques
- Oral: amitriptyline, cimetidine, hydroxyzine, PPS
- Intravesical DMSO, Heparin, Lidocaine
- Pain Management

**THIRD-LINE TREATMENTS**
- Cystoscopy under anesthesia w/ hydrodistention
- Pain Management
- Tx of Hunner’s lesions if found

**FOURTH-LINE TREATMENTS**
- Intradetrusor botulinum toxin A
- Neurmodulation
- Pain Management

**FIFTH-LINE TREATMENTS**
- Cyclosporine A
- Pain Management

**SIXTH-LINE TREATMENTS**
- Diversion w/ or w/out cystectomy
- Pain Management
- Substitution cystoplasty

**RESEARCH TRIALS**
Patient enrollment as appropriate at any point in treatment process

**CLINICAL MANAGEMENT PRINCIPLES**
- Treatments are ordered from most to least conservative; surgical treatment is appropriate only after other treatment options have been found to be ineffective (except for treatment of Hunner’s lesions if detected)
- Initial treatment level depends on symptoms severity, clinician judgment, and patient preferences
- Multiple, simultaneous treatments may be considered if in best interest of patient
- Ineffective treatments should be stopped
- Pain management should be considered throughout course of therapy with goal of maximizing function and minimizing pain and side effects
- Diagnosis should be reconsidered if no improvement within clinically-meaningful time frame

The evidence supporting the use of Neurmodulation, Cyclosporine A, and BTX for IC/BPS is limited by many factors including study quality, small sample sizes, and lack of durable follow up. None of these therapies have been approved by the U.S. Food and Drug Administration for this indication. The panel believes that none of these interventions can be recommended for generalized use for this disorder, but rather should be limited to practitioners with experience managing this syndrome and willingness to provide long term care of these patients post intervention.

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IC/PBS: First Line Therapies

• Patient education
• Heat or cold over bladder or perineum
• Dietary changes (refer to www.ichelp.org/diet)
• Nutrition/short-term pain relievers
  • Nutraceuticals (ie: quercitin, Prelief-like products)
  • Pyridium (phenazopyridine), antispasmodics
• Meditation and guided imagery
• Modify sexual intercourse, tight clothes
• Manage constipation
• Manage stress
IC/PBS: Second-Line Therapies

- Physical therapy
  - Treat trigger points
  - Lengthen contracted muscles
  - Release scar tissue and connective tissue restrictions
  - Avoid Kegels
- Pain management
  - Drugs, stress management, manual therapy
  - Complementary therapies
- Oral medicines (in alphabetical order)
  - Amitriptyline
  - Cimetidine (Tagamet)
  - Hydroxyzine (Vistaril, Altarax)
  - Pentosan Polysulfate (Elmiron)
- Bladder instillations
  - DMSO, heparin, lidocaine (in alphabetical order)
  - DMSO, instill for 15-20 minutes only or may cause pain
IC/PBS: Third-Line Therapies

- Cystoscopy under anesthesia
  - Hydrodistension
  - Fulguration of ulcers
IC/PBS: Fourth-Line Therapies

• Botox Injection
• Neuromodulation
Neuromodulation

• **Off-label use**

  - **Sacral**: frequency, urgency, urge incontinence
  - **Pudendal**: helpful with pudendal neuralgia, PGAD sx

Photo source: Dr. Ken Peters with permission
IC/PBS: Fifth/Sixth Line Treatments

- Cyclosporine A
- Major surgery

- Do not offer
  - Long-term antibiotics
  - Intravesical BCG
  - Systemic steroids
Trigger Point Injections (TPI)

- Mechanical disruption of the trigger point
- Local anesthesia decreases pain response
- Corticosteroids decrease inflammatory response
  - Affect action of cytokines
  - Down-regulate immune function and decrease vascular responses

Algorithm for Treatment with TPI

TPI can be done based every 1-4 wks (steroid every 4-6 weeks)

Patient Evaluation

Use >1 therapy concurrently to promote synergy of action

Trigger Point Injections
Pelvic Floor PT
Medications/Heat/Cold/Reiki/Behavioral Changes
Medication Dosing

• Corticosteroid crystals do not aggregate or change size when mixed with lidocaine solution
  • Can coadminister corticosteroids and lidocaine
• In Europe, maximum dose of lidocaine is 200 mg
  • 20 mL of 1% lidocaine or 10 mL of 2% lidocaine
  • In US, maximum dose is 300 mg
• Maximum safe dose of bupivacaine is approximately 150 mg (2 mg/kg).
  • Equates to 25 mL of 0.5% bupivacaine or 50 mL of 0.25% bupivacaine

Curved Needle Guide with 7-inch Spinal Needle
TPI Technique

- Insert 7-inch needle into guide **before** inserting to ensure needle does not extend past the end

- Slide the long needle through the needle guide into the levator muscle

- Killian (von Eicken) Antrum Cannula by Jarit 14cm x 3.5mm
• Study of 53 women with vaginal/perineal pain
  • Injected 10ml marcaine 0.5% + hydrocortisone 100mg + hyaluronidase 1500IU (enzyme to increase tissue permeability)

• 89% had resolved dyspareunia after injections

• 69% of sexually inactive women became sexually active again by 8 wks after injection

Doumouchtsis SK, Boama V et al. Prospective evaluation of combined local Bupivacaine and steroid injections for the management of chronic vaginal and perineal pain. Arch Gynecol Obstet; published online 11-16-10
TPI Efficacy

• Prospective study of 18 patients
  • Chronic pelvic pain >6 mos duration

• TPI 10 cc of 0.25% bupivacaine, 10cc 2% lidocaine, 1cc triamcinolone (40mg)

• 5cc/trigger point via 23-gauge needle with Iowa Trumpet

• 72% (13/18) reported significant improvement

• 33% (6/18) completely pain free at 3 month follow-up

Complications of TPI

• Vasovagal syncope
  • Take VS before and after TPI

• Infection

• Hematoma
  • Apply direct pressure after injection
  • Tampon

• Needle breakage
  • Needle guide provides support
Behavioral Therapy and Integrative Medicine

- Acupuncture
- Yoga/meditation
- Massage
- Reiki
- Guided Imagery
- Psych & Cognitive behavioral therapy
We Must Do Better!

Although we do not have all the answers yet for these conditions, there is hope…….
Questions

Beaumont Women’s Urology Center  Ph:248-898-0898
http://womenshealth.beaumont.edu/womens-urology-center
Resources/Referrals

- Interstitial cystitis association: www.ichelp.org
- Interstitial cystitis network: www.ic-network.com
- American Psychological Association: www.apa.org
- International Painful Bladder Foundation: http://www.painful-bladder.org
- Pelvic Pain: www.pelvicpain.org
- Vulvodynia: www.nva.org or www.vulvarpainfoundation.org
- www.urotoday.com for a summary of current research
- www.clinicaltrials.gov for current research studies
Resources

• Beaumont Women’s Urology Center for Guided Imagery CDs for IC and Vulvodynia, Pelvic Pain:
  
  http://www.beaumont.edu/guided-imagery-cds

• On-line: www.amazon.com for books, relaxation CDs, “massagers”

• For vaginismus: www.vaginismus.com

• For a low oxalate cookbook: http://www.vulvarpainfoundation.org
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