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Challenges and Opportunities in the Care of Chronic Pelvic Pain

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Disclosures

I have no relevant financial relationships to disclose.

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Educational Objectives

- Describe the basic mechanisms of chronic pelvic pain
- Recall the non-pharmacologic strategies for treating pelvic pain
- List appropriate pharmacologic management options for pelvic pain

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Chronic Pelvic Pain

Definition

- non-cyclic pain
- > 6 months
- pelvis, anterior abdominal wall
- functional disability or leads to medical care

Table 1. Some of the Diseases That May Be Associated With Chronic Pelvic Pain in Women

Gynecologic	Gastrointestinal
Extrauterine	Carcinoma of the colon
Adhesions	Chronic intermittent bowel obstruction
Adnexal cysts	Colitis
Chronic ectopic pregnancy	Constipation
Chlamydial endometritis or salpingitis	Diverticular disease
Endometriosis	Hernias
Endosalpingiosis	Inflammatory bowel disease
Neoplasia of the genital tract	Irritable bowel syndrome
Ovarian retention syndrome (residual ovary syndrome)	Musculoskeletal
Ovarian remnant syndrome	Abdominal wall myofascial pain (trigger points)
Ovarian dystrophy or ovulatory pain	Chronic coccygeal pain
Pelvic congestion syndrome	Compression of lumbar vertebrae
Postoperative peritoneal cysts	Degenerative joint disease
Residual accessory ovary	Disk herniation or rupture
Subacute salpingo-oophoritis (chronic PID)	Faulty or poor posture
Tuberculous salpingitis	Fibromyositis
Uterine	Hernias: ventral, inguinal, femoral, Spigelian
Adenomyosis	Low back pain
Atypical dysmenorrhea or ovulatory pain	Muscular strains and sprains
Cervical stenosis	Neoplasia of spinal cord or sacral nerve
Chronic endometritis	Neuralgia of iliohypogastric, ilioinguinal, and/or genitofemoral nerves
Endometrial or cervical polyps	Pelvic floor myalgia (levator ani spasm)
Intrauterine contraceptive device	Piriformis syndrome
Leiomyomata	Rectus tendon strain
Symptomatic pelvic relaxation (genital prolapse)	Spondylosis
Urological	Other
Bladder neoplasm	Abdominal cutaneous nerve entrapment in surgical scar
Chronic urinary tract infection	Abdominal epilepsy
Interstitial cystitis	Abdominal migraine
Radiation cystitis	Bipolar personality disorders
Recurrent, acute cystitis	Depression
Recurrent, acute urethritis	Familial Mediterranean fever
Stenurohibitinis	Neurologic dysfunction
Uninhibited bladder contractions (detrusor dyssynergia)	Porphyria
Urethral diverticulum	Shingles
Urethral syndrome	Sleep disturbances
Urethral caruncle	Somatic referral

PID = pelvic inflammatory disease.

Chronic Pelvic Pain. Howard, Fred; MS, MD . Obstetrics & Gynecology. 101(3):594-611, March 2003.

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Impacts

- CPP prevalence of 3.8% women age 15-73
- 20% outpatient GYN visits
- 10-15 % hysterectomies
- 40% gynecologic diagnostic laparoscopies
- $2.8 billion dollars of healthcare spending

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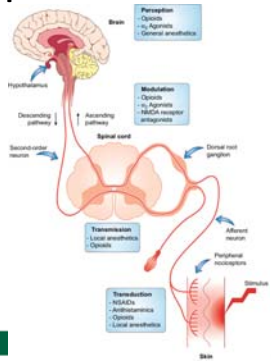
Types of pain- Somatic Pain



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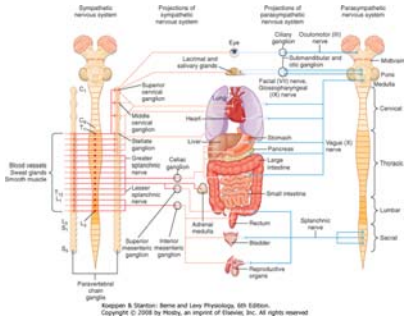
Types of pain- Visceral Pain



Koeppen & Stanton: Berne and Levy Physiology, 6th Edition.
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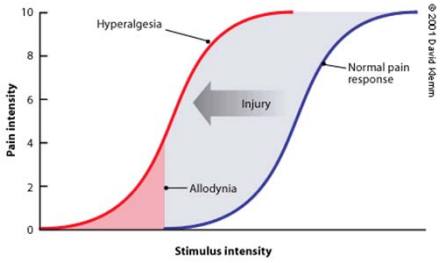
Pain sensitization



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Chronic Pain is complicated

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Approach to pain

- Detailed history
  - Obstetric History
  - Location of pain
  - Severity and Quality
  - Timing of pain
  - Past Surgical History
  - Psychosocial History
  - History of Trauma

Howard. Chronic Pelvic Pain. Obstet Gynecol 2003; 101: 594-611.

Non-pharmacologic Strategies

- Psychotherapy
- Pelvic Floor PT
- Complementary Therapies
- Lifestyle modifications

Psychotherapy

Cognitive Behavior Therapy

- problem-focused, goal-directed
- Learn to recognize contributors to their thoughts and behaviors from environment and to modify their response
- Evidence to support use in studies

Mindfulness

- "Focus on teaching a nonjudgmental and accepting approach to awareness of the present moment"

Pelvic Floor Physical Therapy

- Specialized PT for pelvic floor, hips, back and abdominal wall
- Utilizes therapeutic exercise, manual manipulation, trigger point and myofascial release
- Patient education and empowerment
- Biofeedback and muscle coordination training
- Acupuncture/TENS (next slide)

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Complementary Therapies

Acupuncture

- Mechanism of action is unclear
- Meta-analyses show benefit in many pain conditions

Neuromodulation

- Peripheral electrical stimulation to alter nerve conduction
  - Below pain threshold to stimulate sensory nerves
  - Alter the pain cycle
- TENS (Transcutaneous electric nerve stimulation)
- Cochrane review found benefit in primary dysmenorrhea with high frequency TENS

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Lifestyle Modifications

Diet

- Numerous diets have been researched in chronic pain, +/- Benefit
- Consider if concurrent GI symptoms
  - Gluten free diet possible improve pain in fibromyalgia and endometriosis patients
  - FODMAP (low fermentable oligosaccharides, disaccharides, monosaccharides and polyols)
    - Some evidence in patients with IBS and CPP
- Difficult to implement, recommend dietician involvement

Exercise

- Improvement in pain, quality of life, physical function, mood, and sleep
- Most evidence in fibromyalgia, some in IBS, headache, dysmenorrhea
- 2 randomized controlled trials of yoga in CPP
  - Significant improvements in pain and quality of life

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Pharmacologic Therapy

- Analgesia
  - Non-opioid
  - Opioid
- Neuropathic Treatments
  - Antidepressants
  - Anticonvulsants
- Hormonal Therapy

- *Tramadol*

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Non-opioid Analgesics

- Acetaminophen
- Non-steroidal anti-inflammatories (NSAIDs)
  - Ibuprofen
  - Naproxen
  - Meloxicam

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Opioids

- Mu agonist
  - Peripheral, central and gastrointestinal sites
- Side effects: constipation, N/V, sedations, AMS, respiratory depression (especially w/ other agents)
- Long term effects include hypogonadism
- Literature supports use in cancer pain
- Very little data in other conditions
- R/B/A discussion needed for other conditions

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Opioid Prescribing

- Opioids not 1st line or routine for chronic pain
- Establish/measure goals for pain/function
- Discuss R/B/A
- Use IR for starting, start low/go slow
- Prescribe no more than needed
- Don't use ER/LA for acute pain
- Evaluate risk factors for opioid-related harms
- Follow-up and re-evaluate risk of harm; reduce dose or taper/discontinue if needed
- Check PDMP with every prescription
- Urine drug testing to identify Rx's and undisclosed use
- Avoid concurrent benzos
- Arrange for opioid use disorder treatment /if needed

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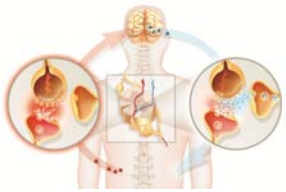
Neuropathic Pain

- Antidepressants
- Anticonvulsants



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Antidepressants (TCAs, SNRIs)

- Block cholinergic, adrenergic, histaminergic, and sodium channels
- Inhibit serotonin and norepinephrine reuptake
- Pain relieving effect is independent of antidepressant effect
- TCAs (most effective)- nortriptyline, Imipramine, desipramine
- SNRIs (effective)- venlafaxine, duloxetine
  - Diabetic neuropathy, nerve injury, PHN, and central poststroke pain
- Side effects based on receptor activity- cardiac conduction abn, urinary retention, dizziness, nausea, orthostatic hypotension
- Check EKG with TCAs
- SSRIS provide little to no analgesic effect- not recommended

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Anticonvulsants (Gabapentin, pregabalin)

- Bind to the calcium channel α2-δ
- Mimic GABA and bind receptors, reducing calcium influx
- Resulting in decrease release of stimulatory glutamate, norephinephrine and substance P
- Conditions supported with literature: Diabetic polyneuropathy, Post-herpetic neuralgia, and mixed neuropathic pain
- SE: dizziness, dry mouth, difficulty concentrating

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Tramadol

- Mixed Mechanism of action: Mu receptor agonist and SNRI
- Abuse liability between NSAIDs and opioids
- Withdrawal syndrome occurs with long term use
- Side effects: hypoglycemia, seizures, serotonin syndrome
  - Nausea, dizziness, dry mouth, abdominal pain

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Hormonal Therapies

- Hormonal Suppression
  - Combined estrogen-progesterone therapy
  - Progesterone only
- Gonadotropin-releasing hormonal analogues
- Androgen therapy
- Hormonal Supplementation
  - Vaginal estrogen

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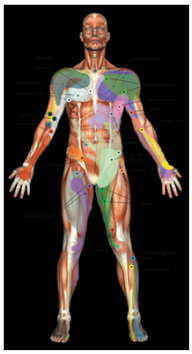
Pain Interventions



- Appropriate patients to consider for referral
- Procedures that may be considered:
  - Trigger point injections
  - Sympathetic blocks
  - Neuromodulation

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Trigger Point Injections

- Focal, hypersensitive areas within muscles, including abdominal wall or pelvic floor
- Palpable and painful, associated with referred pain
- Often component of myofascial pain conditions
- Local anesthetic injection (lidocaine or bupivicaine)
  - Effects outlast medication duration of action
  - Mechanism of benefit unclear
- Dry needling has also been used with benefit

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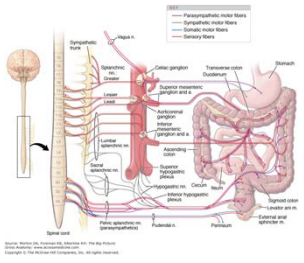
Patients to Consider for Procedures

- Reserved for severe cases of refractory nonmalignant visceral pelvic and abdominal pain
- Diagnostic and Therapeutic
  - Help distinguish referred low back pain from pelvic etiology



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Sympathetic Blocks

- Multiple techniques:
  - Anesthetic blocks: Lidocaine or Bupivicaine
  - Neurolytic blocks:
    - Chemical- alcohol or phenol
    - Destructive- thermal or radiofrequency ablation
- Side effects
  - neurologic injury
  - non-neural tissue injury
  - not effective due to anatomical limitations in some patients (scar tissue)

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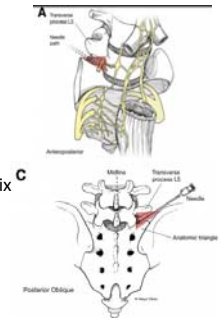
Superior Hypogastric Block

Organs innervated by the superior hypogastric plexus include:

- Bladder, ureters, and urethra
- Proximal small bowel and appendix
- Uterus, fallopian tubes, broad ligament
- Vagina



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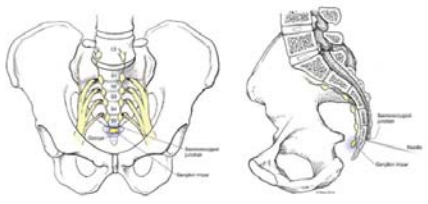
Ganglion Impar Block

- Structures innervated by the Ganglion Impar:
  - Rectum, Anus, Urethra, Vagina and vulva



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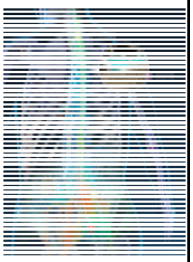
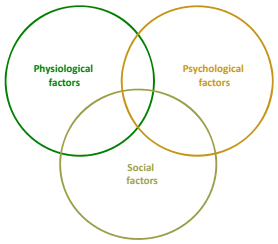
Neuromodulation

- Spinal Cord Stimulator
  - Epidural electrical leads placed to stimulate the dorsal horn of the thoracic spinal cord
  - Percutanous lead trial prior to permanent implantation
  - Implanted generator placed
- Dorsal Root ganglion stimulation
  - Case reports and case series for chronic nonmalignant and cancer related pelvic pain



In Summary

Complex Problem



Multidisciplinary Solution

- Nurses
- Pain managers
- Physicians
- Psychologists
- Rehab specialists
- Social Workers
- Pharmacists

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