**2) Chronic Pelvic Pain - Dr. Muhabat**

### Definition

Chronic Pelvic Pain (CPP) is pain of apparent pelvic origin that has been present most of the time for the past six months.

Frustration for patient and physician because:

- Difficult to diagnose
- Difficult to treat
- Difficult to cure

### Incidence

- Affects 15-20% of women of reproductive age
- Accounts for 20% of all laparoscopies
- Accounts for 12-16% of all hysterectomies
- Associated medical costs of $3 billion annually

### Demographics

- Demographics of age, race, ethnicity, education, and socioeconomic status do not differ between those with and without chronic pelvic pain
- Higher incidence in single, separated or divorced women
- 40-50% of women have a history of abuse

### Etiology

Gastrointestinal, Gynecological, Psychological, Urological, Musculoskeletal

- Diagnosis Distribution
  - Gastrointestinal (37.7%)
  - Urinary (30.8%)
  - Gynecological (20.2%)
- 25-50% of women had more than one diagnosis
- Severity and consistency of pain increased with multisystem symptoms
- Most common diagnoses:
  - endometriosis
  - adhesive disease
  - irritable bowel syndrome
  - interstitial cystitis

### Diagnosis

**HISTORY**

*Obtaining a COMPLETE and DETAILED HISTORY is the most important key to formulating a diagnosis*

- Duration of Pain
- Nature of the Pain: *Sharp, stabbing, throbbing, aching, dull?*
- Specific Location of Pain: *Associated with radiation to other areas?*
- Modifying Factors: *Things that make worse or better?*
• Timing of the Pain
  o Intermittent or constant?
  o Temporal relationship with menses?
  o Temporal relationship with intercourse?
  o Predictable or spontaneous onset?
• Detailed medical and surgical history: Specifically abdominal, pelvic, back surgery

Use the REVIEW OF SYSTEMS to obtain focused, detailed history of organ systems involved in the differential diagnosis

**Gynecological Review of Systems**
• Associated with menses?
• Association with sexual activity? (Be specific)
• New sexual partner and/or practices?
• Symptoms of vaginal dryness or atrophy?
• Other changes with menses?
• Use of contraception?
• Detailed childbirth history?
• History of pelvic infections?
• History of gynecological surgeries or other problems?

**Gastrointestinal Review of Systems**
• Regularity of bowel movements?
• Diarrhea/ constipation/ flatus?
• Relief with defecation?
• History of hemorrhoids/ fissures/ polyps?
• Blood in stools, melena, mucous?
• Nausea, emesis or change in appetite?
• Abdominal bloating?
• Weight loss?

**Urological Review of Systems**
• Pain with urination?
• History of frequent or recurrent UTI?
• Hematuria?
• Symptoms of urgency or urinary incontinence?
• Difficulty voiding?
• History of nephrolithiasis?

**Musculoskeletal Review of Systems**
• History of trauma?
• Association with back pain?
• Other chronic pain problems?
• Association with position or activity?

**Psychological Review of Systems**
• History of verbal, physical or sexual abuse?
• Diagnosis of psychiatric disease?
• Onset associated with life stressors?
• Exacerbation associated with life stressors?
• Familial or spousal support?

**THE PHYSICAL EXAM**

Evaluate each area individually

• Abdomen
• Anterior abdominal wall
• Pelvic Floor Muscles
• Vulva
• Vagina
• Urethra
• Cervix
• Viscera – uterus, adnexa, bladder
• Rectum
• Rectovaginal septum
• Coccyx
• Lower Back/Spine
• Posture and gait

A bimanual exam alone is NOT sufficient for evaluation
### OBJECTIVE EVALUATIVE TOOLS

#### Basic Testing
- Pap Smear
- Gonorrhea and Chlamydia
- Wet Mount
- Urinalysis
- Urine Culture
- Pregnancy Test
- CBC with Differential
- ESR

*Pelvic Ultrasound*

#### Specialized Testing
- MRI or CT Scan
- Endometrial Biopsy
- Laparoscopy
- Cystoscopy
- Urodynamic Testing
- Urine Cytology
- Colonoscopy
- Electrophysiologic studies

*Referral to Specialist*

### Differential Diagnosis
- The differential diagnosis for Chronic Pelvic Pain is extensive
- Challenges the gynecologist to “think outside the uterus”
- Diagnosis, evaluation and treatment plans:
  - Should support with relevant positives and negatives from the History and Physical examination
  - Often requires an interdisciplinary approach

### Gynecological Conditions that may Cause or Exacerbate Chronic Pelvic Pain

#### Level A
- Endometriosis
- Gynecologic malignancies
- Ovarian Retention Syndrome
- Ovarian Remnant Syndrome
- Pelvic Congestion Syndrome
- Pelvic Inflammatory Syndrome
- Tuberculosis Salpingitis

#### Level B
- Adhesions
- Benign Cystic Mesothelioma
- Leimyomata
- Postoperative Peritoneal Cysts

#### Level C
- Adenomyosis
- Dysmenorrhea/Ovulatory Pain
- Nonendometriotic Adnexal Cysts
- Cervical Stenosis
- Chronic Ectopic Pregnancy
- Chronic Endometritis
- Endometrial or Cervical Polyps
- Endosalpingosis
- Intrauterine Contraceptive Device
- Ovarian Ovulatory Pain
- Residual accessory ovary
- Symptomatic Pelvic Prolapse

### Cyclical
- *Endometriosis*
- *Adenomyosis*
- *Primary Dysmenorrhea*
- Ovulation Pain/ MittleSchmertz
- Cervical Stenosis
- Ovarian Remnant Syndrome

### Non-cyclical
- Pelvic Masses
- Adhesive Disease
- *Pelvic Inflammatory Disease*
- Tuberculosis Salpingitis
- *Pelvic Congestion Syndrome*
- Symptomatic Pelvic Organ Prolapse
- Vaginismus
- *Pelvic Floor Pain Syndrome*
ENDOMETRIOSIS

Presence of endometrial tissue outside of uterine cavity

- Usually found in dependent areas of the pelvis
- Most commonly in ovaries, posterior cul-de-sac, uterosacral ligaments
- May be at distant sites such as bowel, bladder, lung, skin, plurae

Etiology not well understood

- Retrograde menstruation
- Lymphatic and hematologic spread of menstrual tissue
- Metaplasia of coelomic epithelium
- Immunologic dysfunction

Signs and Symptoms

- Symptoms
- Dysmenorrhea
- Dyspareunia
- Infertility
- Intermenstrual Spotting
- Painful Defacation
- Pelvic Heaviness
- Asymptomatic

Physical Exam

- Visible lesions on cervix or vagina
- Tender nodules in the cul-de-sac, uterosacral ligaments or rectovaginal septum
- Pain with uterine movement
- Tender adnexal masses (endometriomas)
- Fixation (retroversion) of uterus
- Rectal mass
- Normal findings

Diagnosis

- Diagnosis can be made on clinical history and exam
- Serum CA125 may be elevated but lacks sufficient specificity and sensitivity to be useful
- Imaging studies lack sufficient resolution to detect small endometrial implants
- Laparoscopy is gold standard for diagnosis
  - Multiple appearances: red, brown, scar, white, powder burn, adhesions, defects in peritoneum, endometriomas
  - Allows diagnosis and treatment

Medical Treatment

- NSAIDS for mild disease
- First Line: Oral contraceptives
  - Suppress ovulation and menstruation
  - Cyclical or continuous
  - Improves symptoms in up to 80%
- Second Line: Progestins, GnRH agonists, Danazol
  - Lupron Depot (x 6-12 months)
  - Improves symptoms in up to 80%
  - Side effects: hot flashes, vaginal dryness, insomnia, bone loss irritability
  - “Add back” estrogen +/- progesterone
Surgical Treatment

- Laparoscopic Removal or Destruction
  - Treatment at time of diagnosis
  - Used in conjunction with medical treatment
  - Improves pain in up to 70% of patients
- Laparotomy (TAH/BSO)
  - Inadequate response to medical treatment or conservative surgical treatment with no desire for future fertility
  - May preserve ovaries in young women, but 30% with recurrent symptoms
- Laparoscopic Uterosacral Nerve Ablation (LUNA), Presacral neurectomy
  - Involves transecting the nerve plexus at the base of the cervical-uterosacral ligament junction

ADENOMYOSIS

Description: Presence of endometrial glands within the myometrium

Symptoms: Dysmenorrhea; Menorrhagia; Enlarged boggy uterus; typically affects women 30-40’s

Diagnosis: Pathology, MRI (ultrasound limited usefulness)

Treatment: Hysterectomy

PRIMARY DYSMENORRHEA

Description: Pain associated with menses that usually onsets 1-3 days prior to the onset of menses; last 1-3 days

Risk Factors: Nulliparity, Young Age, Heavy menstrual Flow, Cigarette Smoking

Symptoms: Crampy lower abdominal pain; +/- nausea, emesis, diarrhea or headache, normal physical exam

Treatment: NSAIDS, B6, B1, Hormonal Therapy (OCPs, OrthoEvra, Nuvaring, Mirena IUD, Depo-Provera

PELVIC INFLAMMATORY DISEASE

Description: Spectrum of inflammation and infection in the upper female genital tract

- Endometritis/ endomyometritis
- Salpingitis/ salpingoophritis
- Tubo-ovarian Abscess
- Pelvic Peritonitis

Pathophysiology: Ascending infection of vaginal and cervical microorganisms

- Chlamydia and Gonorrhea (developed countries)
- Tuberculosis (developed countries)
- Acute PID usually polymicrobial infection

CDC Diagnostic Guidelines

- Minimum Criteria (one required):
  - Uterine Tenderness
  - Adnexal Tenderness
  - Cervical Motion Tenderness
  - No other identifiable causes
• **Additional criteria for dx:**
  - Oral temperature greater than 101
  - Abnormal cervical or vaginal discharge
  - Presence of increased WBC in vaginal secretions
  - Elevated ESR or C-reactive protein
  - Documented of GC or CT

• **Specific criteria for dx:**
  - Pathologic evidence of endometritis
  - US or MRI showing hydrosalpinx, TOA
  - Laparoscopic findings consistent with PID

**Treatment:** Multiple inpatient or outpatient antibiotic regimens; total therapy for 14 days

**Sequelae**

- Infertility
- Ectopic Pregnancy
- Chronic Pelvic Pain
  - Occurs in 18-35% of women who develop PID
  - May be due to inflammatory process with development of pelvic adhesions

**PELVIC CONGESTION SYNDROME**

**Description:** Retrograde flow through incompetent valves venous valves can cause tortuous and congested pelvic and ovarian varicosities; Etiology unknown.

**Symptoms:** Pelvic ache or heaviness that may worsen premenstrually, after prolonged sitting or standing, or following intercourse

**Diagnosis:** Pelvic venography, CT, MRI, ultrasound, laparoscopy

**Treatment:** Progestins, GnRH agonists, ovarian vein embolization or ligation, and hysterectomy with bilateral salpingo-oophorectomy (BSO)

**PELVIC FLOOR PAIN SYNDROME**

**Description:** Spasm and strain of pelvic floor muscles

- Levator Ani Muscles
- Coccygeus Muscle
- Piriformis Muscle

**Symptoms:** Chronic pelvic pain symptoms; pain in buttocks and down back of leg, dyspareunia

**Treatment:** Biofeedback, Pelvic Floor Physical Therapy, TENS (Transcutaneous Electrical Nerve Stimulation) units, antianxiolytic therapy, cooperation from sexual partner
Urological Conditions that may Cause or Exacerbate Chronic Pelvic Pain

<table>
<thead>
<tr>
<th>Level A</th>
<th>Level B</th>
<th>Level C</th>
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<tbody>
<tr>
<td>• Bladder Carcinoma</td>
<td>• Detrussor Dyssynergia</td>
<td>• Chronic Urinary Tract Infection</td>
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<tr>
<td>• <em>Interstitial Cystitis</em></td>
<td>• Urethral Diverticulum</td>
<td>• Recurrent Acute Cystitis</td>
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<tr>
<td>• Radiation Cystitis</td>
<td></td>
<td>• Recurrent Acute Urethritis</td>
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<tr>
<td>• Urethral Syndrome</td>
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<td>• Stone/urolithiasis</td>
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<td></td>
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<td>• Urethral Caruncle</td>
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**INTERSTITIAL CYSTITIS**

**Description:** Chronic inflammatory condition of the bladder

**Etiology:** Loss of mucosal surface protection of the bladder and thereby increased bladder permeability

**Symptoms:**
- Urinary urgency and frequency
- Pain is worse with bladder filling; improved with urination
- Pain is worse with certain foods
- Pressure in the bladder and/or pelvis
- Pelvic Pain in up to 70% of women
- Present in 38-85% presenting with chronic pelvic pain

**Diagnosis:**
- Cystoscopy with bladder distension
- Intravesicular Potassium Sensitivity Test
- Presence of glomerulations (Hunner Ulcers)

**Treatment:**
- Avoidance of acidic foods and beverages
- Antihistamines
- Tricyclic antidepressants
- Elmiron
- Intravesical therapy: DMSO (dimethyl sulfoxide)

Gastrointestinal Conditions that may Cause or Exacerbate Chronic Pelvic Pain

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<tr>
<td>• Colon Cancer</td>
<td>• None</td>
<td>• Colitis</td>
</tr>
<tr>
<td>• Constipation</td>
<td></td>
<td>• Chronic Intermittent Bowel Obstruction</td>
</tr>
<tr>
<td>• Inflammatory Bowel Disease</td>
<td></td>
<td>• Diverticular Disease</td>
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<tr>
<td>• <em>Irritable Bowel Syndrome</em></td>
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IRRITABLE BOWEL SYNDROME (IBS)

Description: Chronic relapsing pattern of abdomino pelvic pain and bowel dysfunction with diarrhea and constipation

Prevalence
- Affects 12% of the U.S. population
- 2:1 prevalence in women: men
- Peak age of 30-40’s
- Rare on women over 50
- Associated with elevated stress level

Symptoms
- Diarrhea, constipation, bloating, mucousy stools
- Symptoms of IBS found in 50-80% women with CPP

Diagnosis based on Rome II criteria

Treatment
- Dietary changes
- Decrease stress
- Cognitive Psychotherapy
- Medications
  - Antidiarrheals
  - Antispasmodics
  - Tricyclic Antidepressants
  - Serotonin receptor (3, 4) antagonists

Conclusions
- Chronic Pelvic Pain requires patience, understanding and collaboration from both patient and physician
- Obtaining a thorough history is key to accurate diagnosis and effective treatment
- Diagnosis is often multifactorial – may affect more than one pelvic organ
- Treatment options often multifactorial – medical, surgical, physical therapy, cognitive