# Approach to a female patient with chronic pelvic pain

Prof. Kohinoor Begum

Prof.OBGYN

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# Definition

- Chronic pelvic pain (CPP) is a **non menstrual pain of 3 months duration or longer that localizes to the anatomic pelvis** and **is severe enough to cause functional disability and require medical or surgical treatment.**
- It is a common problem **affecting approximately 1 in 7 women especially among those aged 26-30 years.**

# Patho physiology of pain

- **Acute pain** reflects fresh tissue damage and resolves as the tissues heal.
- **In chronic pain**, the pain may persist long after the original tissue injury or exist in the absence of any such injury.
- **Major changes are seen in both afferent and efferent nerve pathways in the central and peripheral nervous systems.**

# Causes

CPP is a symptom with many potential underlying causes **including:**

- **identifiable pathology** **or**
- **functional pain syndromes**

**Causes:**

- **Reproductive** (Extra uterine & uterine)-**20%**
- **Gastrointestinal -37%**
- **Urologic** - **31%** **most common**
- **Neuromuscular disorders** may cause or contribute to chronic pelvic pain**-12%**
- Sometimes, **multiple contributing factors** may exist in a single patient -**25-50%**

# Causes

| REPRODUCTIVE CAUSE (20% ) | NEUROLOGIC AND MUSCULOSKELETAL- 12% |
|---|---|
| **Endometriosis**<br>**Adhesions**<br>**Chronic PID**<br>Pelvic congestion syndrome<br>**Residual ovarian syndrome** | **Nerve Entrapment Syndro.**<br>**Fibromyalgia**<br>**Levator ani syndrome**<br>Abdo.wall myofascial pain (Trigger point)* |
| UROLOGIC CAUSES **31%** | G .I .TRACT CAUSE **37%** |
| •**Interstitial cystitis**<br>•**Urethral Syndrome**<br>•**Chronic UTI**<br>•Urolithiasis | **Irritable Bowel Syndrome**<br>•**Colitis**<br>•**Carcinoma of the colon***<br>•Inflammat. bowel disease |

# Most commonly diagnosed causes

In a prospective observational study performed at a gynecology referral center**, the most common diagnosis identified, in order,** were:

- **irritable bowel syndrome**
- **adhesions**
- **musculoskeletal causes**
- **endometriosis**
- **Interstitial cystitis**

# Endometriosis

- Common in 10% of reproductive age
- Symptoms **may include dysmenorrhea, non-cyclic pelvic pain, dyspareunia, dysuria, dyschezia, or infertility.**
- Diagnosis of endometriosis is inherently challenging , **may be suspected based on symptoms**, **traditionally required surgical confirmation**
- MRI is most effective in identifying **advanced endometriosis with deep infiltrating lesions**

# Pelvic adhesive disease

- **Adhesions are abnormal reactions to** endometriosis, previous surgery, infection, or inflammation **( not normal healing like scar tissue):**
- that causes internal organs or structures, such as the ovaries and fallopian tubes, **to adhere or stick to one another may cause chronic pelvic pain**.
- **Adhesiolysis is not recommended (**may lead to further adhesion formation )**unless there is intermittent partial bowel obstruction or infertility.**

# Irritable bowel syndrome (IBS)

- IBS is a common GI tract condition **affects the large intestine** characterized by: **chronic abdominal pain & altered bowel habits in the absence of any specific cause.**
- Pain -**exacerbated by events that ↑ GIT motility** like eating, stress, anxiety, depression & menses.
- **Diagnosis is mainly clinical**
- **Treatment include** : • Reassurance, education, stress reduction, bulk forming agents and other symptomatic treatments & **may be low dose tricyclic antidepressants.**

## Interstitial cystitis/bladder pain syndrome

- Defined as suprapubic pain related to bladder filling (↑ **discomfort with bladder filling, & improves after bladder emptying**)accompanied by **↑ daytime & night time frequency in absence of infection** or any other obvious pathology.
- Pelvic myofascial pain is likely a significant contributor for many patients with this condition.
- Prevalence is 2–6% in females between 40 to 60 yrs.
- **Diagnosis is done by exclusion**

# Pelvic myofascial pain

- Among women with chronic pelvic pain, **60–90% have musculoskeletal dysfunction** contributing to their pain symptoms.
- **Exacerbations of pain may be related to** menstrual periods, intercourse, bowel movements, urination or having a full bladder, activities such as standing or driving for long periods.
- **Diagnosis** is **typically based on pain with palpation of pelvic floor muscles**, accessed through the vagina.

# Psychology and CPP

- Patients with CPP are often anxious and depressed.
- Their marital, sexual, social and occupational lives are disrupted.
- Child sexual abuse make an individual more vulnerable to the development of CPP in her adult life.
- Women who continue to be abused are particularly at risk.

# Over view of approach

A stepwise approach when evaluating these patients, including:

- **Gather and review all available data**, ideally prior to the initial patient visit
- Recognize that initial clinical **evaluation and counseling may require more than one office visit**
- **Utilize standardized questionnaires to elicit the history, associated symptoms,** assess for mental health concerns
- **Perform a physical examination** and **complete targeted testing.**

# Diagnosis of chronic pelvic pain

- Because a number of different conditions can cause chronic pelvic pain, **it is sometimes difficult to pinpoint the specific cause**.
- A thorough **history** , including **reproductive, GI, musculoskeletal, urologic, and neuropsychiatric** and **a physical examination** **of the abdomen and pelvis** are essential components of the work-up for women with pelvic pain.

# Evaluation

**HISTORY**: Ask the patient about the pain :

- Location
- Radiation
- Severity
- Aggravating factors
- Alleviating factors
- Effect of menstrual cycle/Stress/Work/ Exercise/ Intercourse
- Context in which pain arises
- Social and occupational toll of the pain

## *Clinical Clues from history in CPP*

**Type of pain/ Quality of pain**

- **Crampy pain-** IBD, IBS, uterine.
- **Hot, burning or electric shock–like pain** -Nerve entrapment, neuropathic
- **Throbbing**- might related to infection
- **Aching**- muscular pain

**Precipitating factors /aggravating factors**

- Pain that **↑ with eating and/or improves with bowel movement**-**is suggestive of a G.I.Tract process**
- Pain **related to posture & worse at end of day**-**Pelvic congestion syndrome**

# *Clinical Clues from history in CPP*

**Relation of pain to events:**

- Pain fluctuates with menstrual cycle - **Adenomyosis, endometriosis**
- Pain fluctuation unassociated with menstrual cycle-**Adhesions, interstitial cystitis, IBS, musculoskeletal etiologies**
- Pain related with urge to void **-Interstitial cystitis, urethral syndrome**
- Pain related to intercourse-**endometriosis, PID, Pelvic fibromyalgia**

## *Clinical Clues from history in CPP*

**Alleviating factors**

- Pain decrease with rest- **may be of musculoskeletal or adnexal origin.**

**Pain associated with H/O:**

- Unexplained wt.loss- **Cancer, systemic illness**
- Post coital bleeding, Postmenopausal bleeding/ onset of pain**-Possibilities of Genital tract cancer**
- Prior abdominal /pelvic surgery or infection, IUCD insertion **- Adhesions**
- Spreading or radiation of pain**-mostly neuropathic**

# Gynecologic and obstetric history

- **Excessive bleeding** with menses **suggests uterine leiomyomas or adenomyosis,PID**
- **History of previous surgery** may suggest **intra-abdominal or pelvic adhesions.**
- **Having multiple sexual partners** is a **risk factor for pelvic inflammatory disease**
- Women with **higher levels of dysmenorrhea, pelvic pain, depression- adenomyosis &severe endometriosis**
- **Constant burning pain** is a common complaint in patients with **pudendal neuralgia**

# Psychological

A good **psychosocial or psychosexual** history is needed **when organic diseases are excluded or coexisting psychiatric disorders are suggested.**

**Obtain sufficient history to evaluate** :

- depression
- anxiety disorder
- somatization
- physical or sexual abuse
- drug abuse or dependence, and
- family problems , marital problems or
- sexual problems.

# Physical examination

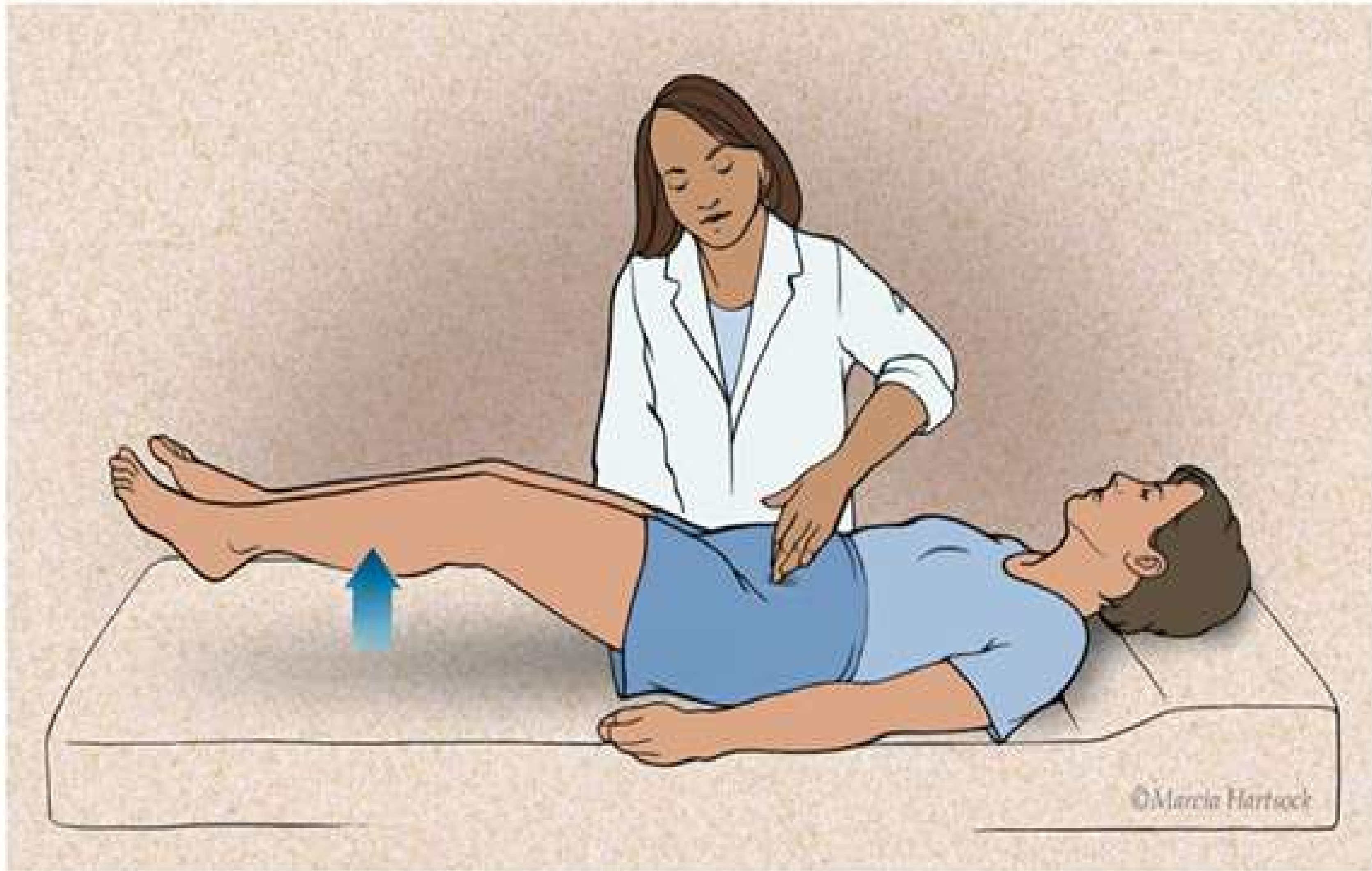
- **The primary goal is to identify the anatomic locations and structures that reproduce the patient's pain.**
- Good rapport, tolerance, and an open-minded approach are important in the evaluation of any patient with chronic pain.
- **A thorough systematic examination of obstetric-gynecologic and other systems usually suggests an appropriate diagnosis and therapy.**

# Physical examination

## Abdomen

- **Evidence of masses**, hernia, inguinal adenopathy, pubic symphysis pain , scars, or evidence of previous trauma or surgery
- **Single digit deep palpation**: Differentiate focal versus diffuse pain- trigger points
- **Worsened pain during flexion, a "positive Carnett's sign,"** is more **likely a result of pain in the abdominal wall**, whereas **improved pain during flexion suggests an underlying visceral etiology.**

# The Carnett's test for patients with pelvic pain.



# Pelvic examination

- The pelvic examination is typically performed in the lithotomy position & includes :
- **Visual inspection of the external genitalia-**
- for any lesion on the introitus, urethra, **sub urethral mass**, fullness, or tenderness
- **Basic sensory testing and evaluation for trigger points** **-**A cotton-tipped swab can be used for precise sensory and tender-point evaluation for women with vulvar pain

# Pelvic examination

**Speculum examination**:

- Lesions, ulcerations, or erythema of **vaginal mucosa, cervix, and posterior vaginal fornix**;
- Cervical and/or vaginal swab for cultures if purulent discharge noted

- **Single digit vaginal examination**: **Tenderness or spasticity of pelvic floor muscles,** urethra, bladder, cervix, lower uterine segment, and vaginal fornices – **for Vulvodynia, Adhesions, endometriosis, nerve entrapment**

# Pelvic examination

**<u>Bimanual examination</u>**

- **Enlarged or tender uterus- Adenomyosis, chronic endometritis, Fibroids**
- **Lack of uterine mobility--Adhesions, endometriosis**
- **Adnexal mass-Ovarian neoplasm**
- **Uterosacral ligament abnormalities- Adenomyosis, endometriosis, malignancy**
- **Pelvic floor muscle tenderness-Interstitial cystitis/painful bladder syndrome, levator ani syndrome**

# Pelvic examination

- **Rectovaginal examination**: Tenderness and/or nodularity of rectovaginal septum and uterosacral ligaments –Endometriosis, malignancy
- **Colposcopic evaluation -**of the vulva and vestibule

# Other Physical examination

Perform detailed examinations for other systems (**eg, -GI, urologic, neurologic, musculoskeletal) as required**. For example:

- **Gait and posture evaluation**
- Muscle strength, tone, spasticity or asymmetry
- **Spine examination**(including sacrum and coccyx) -Spine curvature, injury or surgery & sacroiliac joint tenderness
- **Different range of motion of Hip joint** and
- Sensory and motor examination are often useful **by different maneuvers.**

# Investigation

If the history & physical examination do not lead to a diagnosis, **sometimes investigation needed to provide appropriate and safe medical or surgical treatment**

- **β-hCG**: -A pregnancy test may be recommended, depending upon the results of the physical examination.
- **CBC:** Infection, systemic illness, or malignancy (elevated/decreased WBC or anemia)
- **Hormone assays: FSH, TSH, Estradiole,etc**

# Investigation

- **ESR**: Infection, malignancy, systemic illness
- **Vaginal swabs**: gonorrhea & chlamydia: PID
- **Urinalysis & urine culture**: Bladder malignancy, infection
- **Cancer screenings** appropriate to age & risk factors.-HPV-DNA testing, Tumour markers eg CA 125 etc,
- All sexually active women with chronic pelvic pain **should be offered screening for sexually transmitted infections (STIs).**

# Pelvic ultrasound

**A pelvic USG is more accurate in detecting pelvic masses including :**

- ovarian cysts ,endometrioma, pelvic endometriosis
- Adenomyosis, uterine fibroids
- hydrosalphinxes ,pelvic varicosities, and
- hernias (spigelian hernias).

**MRI & CT should <u>not</u> be used routinely, but can help to assess any abnormalities found on TVS (more expensive than sonography. )**

# Laparoscopy

**Indication:**

- Where diagnosis remains elusive after the initial workup
- **Confirm or treat, suspected endometriosis, adhesions, or both, chronic PID.**
- when the patient has specific concerns such as the existence of endometriosis or adhesions **potentially affecting her fertility.**

# Laparoscopy

**Other pathologies that could be diagnosed by laparoscopy includes** :

- ovarian cysts
- hernias
- pelvic congestion syndrome
- ovarian remnant syndrome
- ovarian retention syndrome
- postoperative peritoneal cysts, and
- endosalpingiosis.

# Laparoscopy

- **If the laparoscopy is normal**, the physician can then focus the **diagnostic and treatment efforts on non-gynecologic causes of pelvic pain.**
- **If the laparoscopy is abnormal** (eg, areas of endometriosis or abnormal tissue are seen) **these areas may be treated or biopsied during the procedure**

# Other Tests

**Endoscopic procedures**

Used commonly in the evaluation & treatment of patients with chronic pelvic pain include:

- laparoscopy
- Cystourethroscopy
- hysteroscopy
- sigmoidoscopy, and
- colonoscopy.

# Radiology

- **Plain film radiography**
  - Obtaining chest and spine radiographs
  - Flat and upright abdominal radiographs
- **Bone scan**
- **Hysterosalpingography** -useful in cases suggestive of endometrial polyps, Asherman syndrome,
- **For urinary chronic pelvic pain-**

  Voiding cystourethrography,

  Double-balloon cystourethrography
- **For GI etiology of chronic pain-**. Barium enema radiography

# The goals of treatment

**The goals of treatment must be realistic.**

- Should be focused toward restoration of normal function (minimal disability)
- Better quality of life, and
- Prevention of relapse of chronic symptoms.

# Types of Interventions

- **Lifestyle**: exercise, Yoga, aerobic , dietary
- **Psychological**: Cognitive behavior therapy, Psychotherapy, Counseling, Physical therapy, Biofeedback.
- **Psycho physiological therapy**
- **Medical Care**
- **Surgical Care**

# Coping with CPP

**Psychological counseling-** **m**ay be offered to help women to manage their pelvic pain.

There are several types of psychosocial support:

- Psychotherapy involves meeting with a psychologist, psychiatrist, or social worker:
- **to discuss emotional responses to living with chronic pain, treatment successes or failures, and/or personal relationships.**

# Behavioral interventions

- **Somato- cognitive therapy-** hybrid of cognitive **psychotherapy and physiotherapy- is one of the promising treatment method of CPP**
- **Its goal is -to promote awareness of one's own body, develop coping strategies, and manually release muscular pain**
- When combined with specific gynecologic care, **somato-cognitive therapy improves distress, pain experience, and motor function**

# Psycho physiological therapy

**Includes:**

– reassurance

– counseling

– relaxation therapy

– a stress management program, and

– biofeedback techniques.

**With these modalities of treatment, both frequency and severity of chronic pain may be reduced.**

# Physical therapy

**Techniques include**:

– hot or cold applications

– positioning, stretching exercises,

– Traction, massage,

– ultrasound therapy,

*__Heat, massage, and stretching can be used to alleviate excess muscle contraction and pain__.

*__Pelvic floor training also may be recommended.__

# Medical Care

- Treatment of CPP is complex , **usually requires specific treatment and simultaneous psychological and physical therapy.**
- **A good relationship should be established** between the clinician and the patient.
- Treatment of CPP **must be tailored for the individual patient.**
- Optimal treatment of any chronic pain condition **must address both peripheral and central contributions.**

# Pharmacotherapy

**Is symptomatic abortive therapy to stop or reduce the severity of the acute exacerbations and long-term therapy for chronic pain.**

**Commonly used drugs are:**

| | |
|---|---|
| **Acetaminophen**<br>Gabapentin/pregabalin*<br>**NSAIDs, Opioids***<br>OCP,  Progestogen GNRH agonist,). | Venoactive drugs–Daflon<br>**Selective serotonin reuptake inhibitors***<br>Tricyclic antidepressants (serotonin)* |

# If no cause-Multidisciplinary approach

**Team members-**

- Gynaecologist
- Physiotherapist
- Chronic pain specialist
- General practitioners
- Gastroenterologist
- Urologist
- Psychologist/Psyciatrist.

# Surgical Care

Various minimally invasive techniques may provide pain relief- include the following:

- **Trigger point injections**: mostly for localized trigger points (myofascial pain of abdominal wall/pelvic floor or neuroma).
- **Peripheral nerve blocks**: Specific peripheral nerve block in selected cases.
- **Sacral nerve stimulation** may be effective in the treat.of therapy-resistant pelvic pain syndromes

- _**presacral neurectomy** , **paracervical denervation** , and **uterovaginal ganglion excision-** may be considered to treat chronic pelvic pain

# Surgical Care

- Some women benefit from **surgical removal of their endometriosis.**
- **Hysterectomy** may alleviate chronic pelvic pain, especially when it is due to uterine disorders such as adenomyosis or fibroids
- **Hysterectomy is not a good choice for the management of chronic pelvic pain in women who have not completed their family**

# Patient Education

- The patient and the patient's family **should have a good understanding about the multi factorial nature of chronic pain.**
- They **need multidisciplinary and comprehensive management plans.**
- Instruct the patient to avoid uncomfortable stressful positions and bad posture.
- Also recommend **regular exercise, good sleeping habits, and balanced meals**.
- **Try biofeedback and relaxation techniques**.

# Take Home Message

- Chronic pelvic pain is not just a gynaecological issue and **requires multidisciplinary approach for its management.**
- Psychological factors play an important role in its genesis and **thus behavioural therapy should be started for all patients.**
- Laparoscopy should be reserved for cases **requiring help with diagnosis, having infertility or requiring interventions.**

THANK YOU