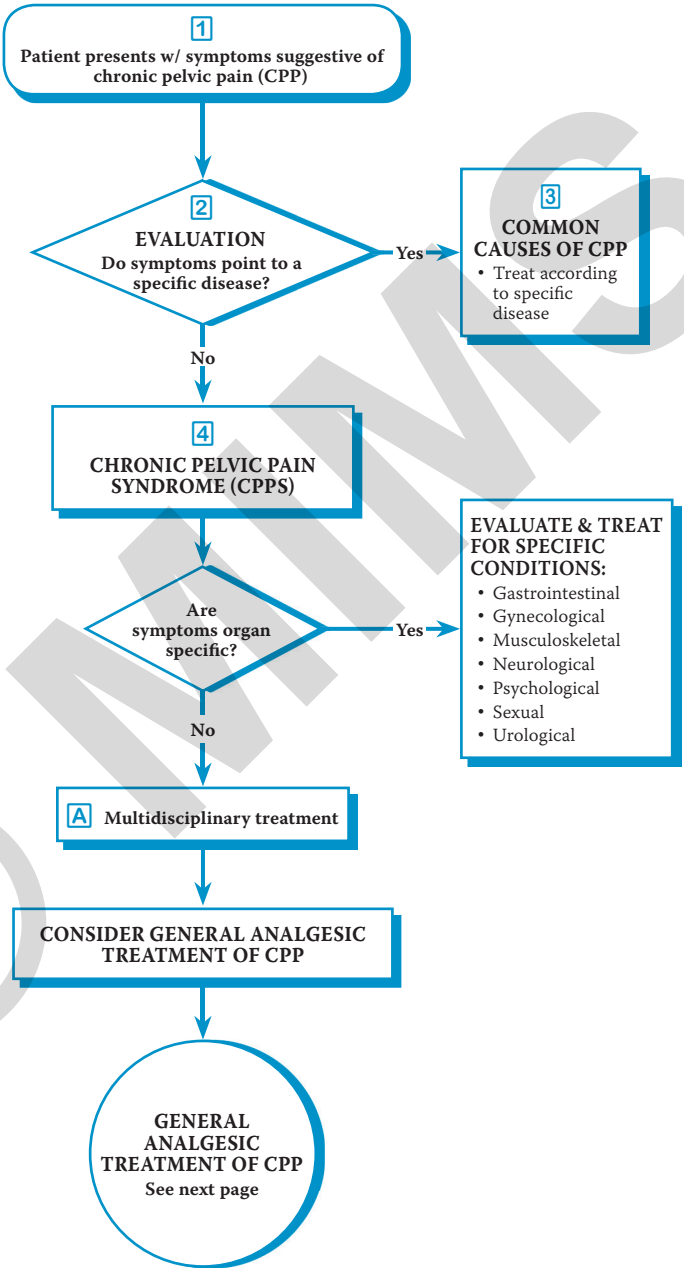
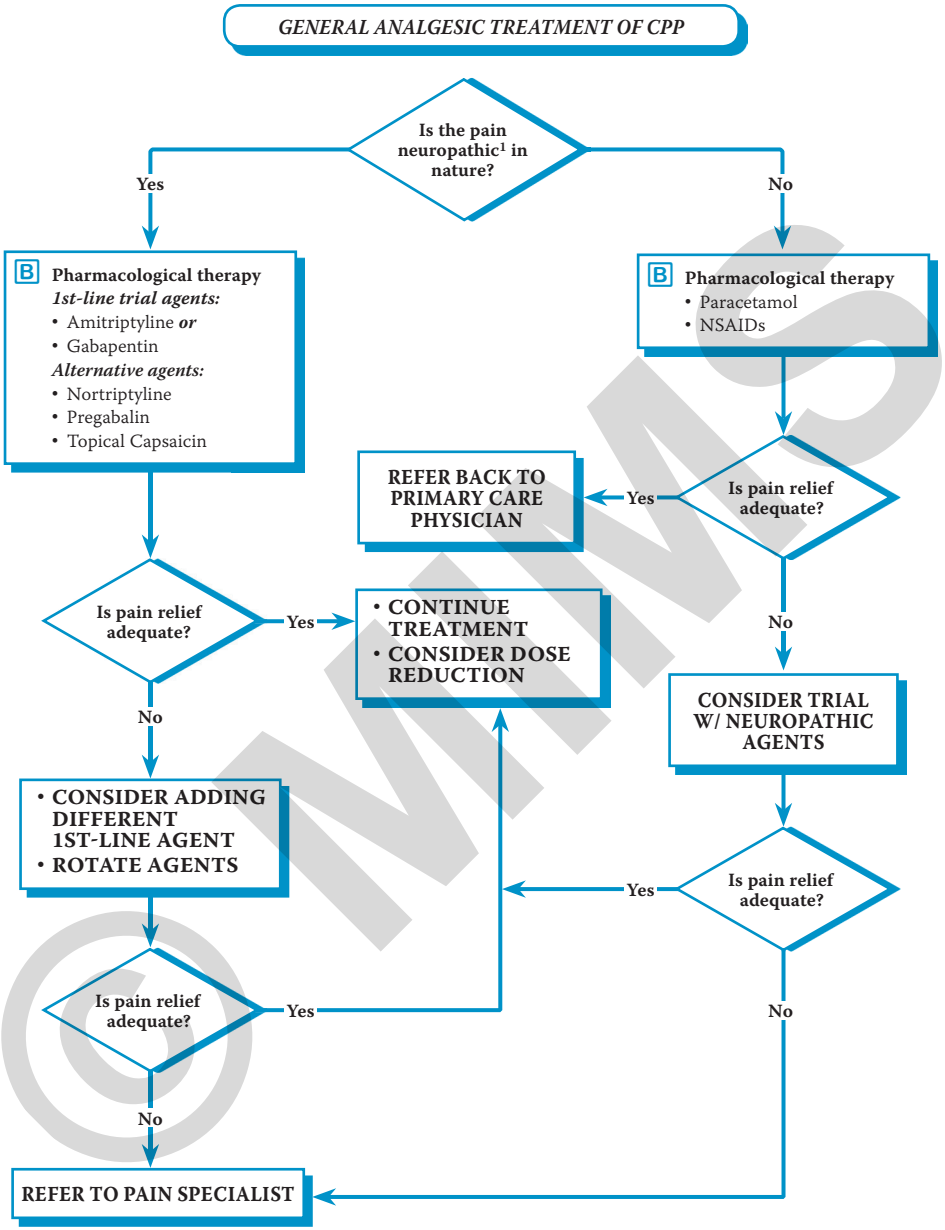
Chronic Pelvic Pain in Women (1 of 16)





[1]Please see Neuropathic Pain disease management chart for further information.

1 CHRONIC PELVIC PAIN

- Chronic pelvic pain (CPP) is a persistent, distressing, & severe pain of >6-month duration; occurs intermittently, cyclically, or situationally; localized to the pelvis, anterior abdominal wall at or below the umbilicus, the lumbosacral back, or the buttocks; & is severe enough to cause functional disability or need medical care
  - In women, CPP is not restricted to intercourse or menstruation & is not associated w/ pregnancy
- It is a symptom w/ a number of contributory factors & not a diagnosis; pathophysiology is complex & not well understood
  - It is assumed that in the development of chronic pain, the nervous system is affected among others by inflammatory & chemical mediators & hormones
- A complex problem that is both multifactorial & multidimensional
- CPP mechanisms include acute pain that is in progress involving visceral or somatic tissue, chronic pain involving the CNS, & cognitive, behavioral, emotional, & sexual responses & mechanisms
- CPP may be subdivided into specific disease-associated pain (conditions w/ well-defined pathology) & chronic pelvic pain syndrome (those without obvious pathology)

2 EVALUATION

History

- A complete & detailed history should include organ-specific inquiries on gastroenterologic, gynecologic, musculoskeletal, urologic & neurologic symptoms including a thorough review of systems of infectious, endocrine, psychiatric & sexual disorders
  - Ask for previous radiation or medical treatment, recent pregnancy, history of pelvic surgery or infections or use of IUD, history of physical or sexual abuse, history of alcohol & drug abuse
    - A history of sexual abuse as a child may lead to the development of depression, anxiety or somatization which makes patient vulnerable to developing CPP
  - Rule out malignancy or other severe systemic diseases by noting "red flag" symptoms eg rectal bleeding, pelvic mass, weight loss, suicidal ideation, new bowel symptoms at >50 years of age, postcoital bleeding, new pain after menopause, irregular vaginal bleeding >40 years of age
- Characterize pain according to its quality, duration, location, intensity, timing, aggravating or alleviating factors, trigger situation, relation to movement & posture, association w/ menses, sexual activity, urination, defection, effect on quality of life
  - Visceral pain is dull, crampy, or poorly localized, somatic pain may be dull or sharp, & neuropathic pain may be burning, stabbing, electrical, or paresthesia-like
- CPP often has more than one component & goal of assessment is to investigate contributing factors related to CPP including environmental, social (social isolation, family problems), cognitive (pain assessment, pain control perception), emotional (symptoms of anxiety or depression), behavioral (level of activity & medication use), & physical (tiredness, sexual dysfunction, sleep problems)
  - May make use of the history & PE forms from the International Pelvic Pain Society
  - Psychological comorbidities may also be detected using other validated symptom-based tools

Physical Examination

- If pain is intermittent, patient is best examined while in pain in order to look for pathological conditions & to be able to reproduce the pain to identify physical contributors
- Observe for general demeanor, mobility, & posture when patient walks into the clinic
- Check the back for trigger points, pelvic asymmetry, sacroiliac tenderness
- Abdominal exam includes checking for skin lesions, hypersensitivity around scars, or trigger points (areas where light localized pressure elicits a vigorous pain response)
  - A positive Carnett's sign (examiner's finger on the tender area of the patient's abdomen while patient raises both legs off the table) w/ an increase in pain indicates a myofascial cause of the pain
  - Pain lessening on the head-raise test indicates an intraperitoneal cause of pain
- Individual pelvic structures are then examined to differentiate sources of pain & localized areas of tenderness are identified to help guide specific therapy
  - Palpation of the back, outer pelvis, & pelvic floor may show trigger points indicating a myofascial component
    - Inspect also for enlargement, distortion, prolapse, discoloration, or infectious sequelae
  - External genitalia exam, pelvic examinations w/ a single-digit one-hand exam followed by a bimanual exam, & a rectal exam to check for nodularity, masses, or point tenderness

2 EVALUATION (CONT'D)

Lab Tests

- Initial workup includes a CBC, ESR, urinalysis w/ urine culture, beta-hCG, vaginal & endocervical swabs, & stool culture
  - Offer screening for sexually transmitted infections to sexually active patients w/ CPP
- Cancer screening appropriate to patient's age & related risk factors should be done
  - A serum CA-125 should be measured if the following symptoms occur >12 times per month: Early satiety, bloating, pelvic pain, urinary urgency or frequency
- The history & PE may point toward a specific diagnosis for which special testing may be indicated
  - Other special diagnostic tools or methods are reserved for specific questions but should not be included in the routine diagnostic workup

Imaging

- Eg Ultrasound, MRI, CT scan
- Should only be performed when clinically indicated
- Transvaginal pelvic ultrasound is part of the initial diagnostic workup if history & physical exam are unrevealing of a specific diagnosis
  - Useful in evaluating pelvic masses
- MRI & CT scans are not routinely done but can help evaluate ultrasound findings
  - MRI may be helpful if a clear cause for pain was not elicited on examination of patient
  - MRI may be used in assessing palpable nodules in the pelvis or rectovaginal disease

Laparoscopy

- If a pelvic abnormality is suspected, laparoscopy is performed to confirm diagnosis & to treat contributing conditions (endometriosis, adhesions, or both)
- The mainstay of both diagnosis & surgical treatment of CPP in women

3 COMMON CAUSES OF CPP

- The following are the common causes of CPP
- Treatment is directed towards the specific condition & according to its specific guidelines

Gastrointestinal:	**Gynecological:**	**Musculoskeletal:**
Irritable bowel syndrome*	Endometriosis*	Myofascial pain (trigger points)
Inflammatory bowel disease*	Dysmenorrhea*	Pelvic floor myalgia & spasms/ prolapse
Abscess	Pelvic adhesions	Pelvic girdle pain
Chronic appendicitis	Pelvic inflammatory disease*	Coccygodynia
Constipation*	Vulvodynia	Stress fractures
Diverticulitis*	Chronic endometritis	Chronic back pain
Neoplastic lesions	Adenomyosis	Disc disease
Chronic intermittent bowel obstruction	Gynecologic malignancies	Levator ani syndrome
Hemorrhoids*	Deformities/Prolapse	Hernias
Anal fissure*	Ovarian cysts	Musculoskeletal & connective tissue malignancies
Proctitis	Residual ovary syndrome	
	Ovarian remnant syndrome	
	Post-hysterectomy pain	
	Pelvic congestion syndrome	
	Fibroids or Leiomyomas*	

*Please refer to the corresponding disease management chart for more information

3 COMMON CAUSES OF CPP (CONT'D)

Psychiatric/Neurological:
Depression*
History of or current physical or sexual abuse
Sleep disturbance
Nerve entrapment syndrome
Psychological stress (work, marital)
Substance abuse
Neurologic dysfunction
Neuropathic pain*
Somatoform pain disorders
Schizophrenia*, schizotypal & delusional disorders

Urological:
Interstitial cystitis
Urethral syndrome
Chronic urinary tract infection*[1]
Bladder stones or dysfunction
Urolithiasis*
Urological malignancies

Others:
Infectious diseases
Chronic pain syndromes
Mesh infection
Sickle cell disease
Porphyria
Hyperparathyroidism*
Herpes zoster
Heavy metal poisoning

*Please refer to the corresponding disease management chart for more information
[1]Urinary Tract Infection in Women – Complicated or Urinary Tract Infection – Uncomplicated disease management charts

4 CHRONIC PELVIC PAIN SYNDROME (CPPS)

- A subdivision of CPP, CPPS is pain localized to >1 organ site
  - Patients may perceive the pain as coming from 1 organ or from systemic symptoms
- The term CPPS may also be used when pelvic pain is poorly localized or specific pathology is unidentified
- It is the occurrence of CPP without an obvious ongoing disease process that can account for the pain, often associated w/ negative behavioral, cognitive, emotional or sexual consequences in addition to symptoms that are suggestive of a bowel, lower urinary tract, gynecological, or sexual dysfunction
- Also suggested by the following: Pain persistence >6 months, incomplete pain reduction from prior therapies, pain is not consistent w/ tissue damage, loss of function & signs of depression are present, changes in the relationship & family dynamics
- Mechanisms include neuroplasticity & neuropathic pain mechanisms
- Should be subdivided according to its corresponding phenotype based on the classification proposed by the European Association of Urology (EAU) if w/ adequate evidences
  - Based on the axis system recommended by the International Association for the Study of Pain (IASP)

Gastrointestinal Aspect

Chronic Anal Pain Syndrome (Chronic Proctalgia)

- The following criteria should be met for the past 3 months w/ onset of symptoms at least 6 months before diagnosis: Chronic or recurrent rectal pain or aching, episodes lasting at least 20 minutes, other causes of rectal pain are excluded eg coccygodynia, cryptitis, hemorrhoids, inflammatory bowel disease, intramuscular abscess & fissure, ischemia
- Also demonstrates severe tenderness on posterior traction of the puborectalis muscle
- Intermittent chronic anal pain syndrome (proctalgia fugax) may be considered a subgroup of the chronic anal pain syndromes
  - The following diagnostic criteria should be met for the past 3 months w/ onset of symptoms at least 6 months before diagnosis: Recurring episodes of pain localized to the anus or lower rectum, episodes lasting from several sec to min, absence of anorectal pain between episodes
- Workup: Endoscopy, anorectal manometry, rectal balloon expulsion test, MRI defecography, pelvic floor muscle testing
- Treatment: Biofeedback is the preferred treatment, Botulinum toxin A injection, electrogalvanic stimulation (less effective than biofeedback), percutaneous tibial nerve stimulation
  - May consider sacral neuromodulation; inhaled Salbutamol for intermittent anal pain syndrome

Gynecological Aspect

- Pain that is predominantly cyclical is likely to have a gynecological cause
- Pain associated w/ gastrointestinal & urinary symptoms must be assessed carefully
  - Symptoms suggestive of IBS or interstitial cystitis are frequently seen in women w/ CPP & these may be a primary cause or a component of CPP or a secondary effect brought about by the efferent neurological dysfunction of CPP

4 CHRONIC PELVIC PAIN SYNDROME (CPPS) (CONT'D)

Gynecological Aspect (Cont'd)

Dysmenorrhea

- May be considered as a chronic pain syndrome if persistent & associated w/ negative behavioral, cognitive, emotional or sexual effects

Endometriosis-associated Pain Syndrome

- Patients w/ laparoscopically-confirmed endometriosis w/ chronic or recurrent pain despite appropriate therapeutic strategies & associated w/ negative behavioral, cognitive or emotional effects, or sexual, urological or bowel dysfunction

Vaginal & Vulvar Pain Syndrome

- Pain persisting for >6 months in the vagina or the female external genitalia (vulva which includes the labia, clitoris, & vaginal entrance) w/ no known cause; also called vulvodynia
- Causes of vulvodynia include history of chronic antibiotic use or sexual abuse, hormonal changes, injury or irritation to the nerve or muscle, hypersensitivity to yeast infections or allergies to chemicals or other substances, abnormal inflammatory response to trauma or infection
- Workup: Complete gynecological examination, ultrasound, laparoscopy
- Treatment: Hormonal treatments (combined oral contraceptives, progestins, GnRH agonists, or Danazol) should be considered for pain that seems to be cyclical in nature
  - Laparoscopy for treatable causes
  - Other therapies include a multidisciplinary approach for persistent diseases & psychological treatment for refractory chronic vulvar pain

Musculoskeletal Aspect

Coccyx Pain Syndrome (Coccygodynia)

- Pain at the coccyx elicited by its manipulation that is due to pelvic floor hypertonicity & reduced coccyx mobility
- Usually related to prolonged sitting or trauma & is worsened by arising, bending, sitting, defecation, or intercourse
- Workup: Local anesthetic injection produces pain relief
- Treatment: Anti-inflammatory drugs, physical therapy, massage, neuroablation
  - Consider local injection if coccyx is unstable

Pelvic Floor Muscle Pain Syndrome

- A dull pressure or ache that worsens w/ sitting or lying down & is frequently associated w/ incomplete evacuation
- CPP can be a form of myalgia due to misuse of the pelvic floor muscles; pelvic floor overactivity & myofascial trigger points may also be involved
- Workup: Test for pelvic floor function & myofascial trigger points, pelvic floor muscle EMG
- Treatment: First-line treatment is pelvic floor muscle therapy in patients w/ CPPS
  - Use biofeedback as adjuvant to muscle exercises
  - Treatment by pressure or needling is recommended for myofascial trigger points
  - May consider Botulinum A toxin injection for trigger points & pelvic floor muscle overactivity
  - Management of pain will involve a physiotherapist, a pain doctor, & a psychologist

Neurological Aspect

Pudendal Neuralgia

- Burning, crushing or electric pain perceived in the perineum from the anus to clitoris
- Related features include allodynia (pain on light touch), dysesthesia (unpleasant sensory perceptions usually but not necessarily due to provocation), hyperalgesia (heightened pain perception after a painful stimulus), & paresthesia (pins & needles)
- Associated w/ history of pelvic surgery, prolonged sitting, & postmenopausal older women; rarely in trauma (eg birth trauma, fractures, falls), cancer, or cycling
- Patient's immobility & disability develop muscular aches & pain that lead to involvement of the musculoskeletal system
- Workup: Imaging & neurophysiology may aid in the diagnosis, but investigations are often normal
  - Gold standard is an image & nerve locator-guided local anesthetic injection
- Treatment: Refer to a specialist if a peripheral nerve problem is suspected
  - Treat as for any other nerve injury; utilize available standard regimens to neuropathic pain management

Psychological Aspect

- Majority of patients meet the diagnostic criteria for a persistent somatoform pain disorder in which pain is associated w/ psychosocial problems or emotional conflict
- Evaluating the link between psychiatric diseases & CPP is difficult; while chronic pain can result in a psychopathology, an existing psychopathologic condition may also affect pain perception & encourage the development of chronic pain

4 CHRONIC PELVIC PAIN SYNDROME (CPPS) (CONT'D)

Psychological Aspect (Cont'd)

- Women w/ CPP often have comorbid conditions eg anxiety, depression, substance abuse, or sexual problems
  - Anxiety may be related to the patient's fears of an undiagnosed pathology as the cause of pain, eg cancer, & to uncertainties regarding treatment possibilities & the probable prognosis if treated or not
  - Depression may be attributed to pain or its impact
- Workup: Assess patient's psychological history & pain-related beliefs & behavior
  - Asking the patient's perception about pain gives the chance for appropriate information & reassurance
- Treatment: Offer psychological interventions in combination w/ other modalities eg medical & surgical treatments
  - Psychologically-informed physical therapy results in improved pain & function
  - Exercise & cognitive behavioral therapy combined w/ Medroxyprogesterone acetate reduces pelvic pain in majority of women

Sexual Aspect

- Sexual dysfunction is prevalent in patients w/ pelvic pain syndrome, is multifactorial, & may be related to depression, use of antidepressants, relationship satisfaction, & many others
  - In women, dysfunctions that are most reported are sexual avoidance, dyspareunia, & vaginismus
- Patients w/ symptoms suggesting CPPS should be screened for sexual abuse
- Workup: Inquire regarding psychiatric history & history of relationship, sexual functioning, & negative experiences eg abuse
  - May use the Female Sexual Function Index (FSFI) questionnaire
- Treatment: Refer to a specialist for management of sexual dysfunction
  - Utilize a biopsychosocial approach in pain treatment
  - Offer partner treatment & behavioral strategies for coping w/ sexual dysfunction
  - Refer for pelvic floor muscle physical therapy

Urological Aspect

Bladder Pain Syndrome

- Pain, discomfort, or pressure perceived to be related to the bladder w/ at least daytime &/or nighttime increase in urinary frequency, aggravated by food or drink, relieved by voiding but returns soon, & other well-defined pathologies excluded
- Workup: Urinalysis, urine culture, uroflowmetry, general anesthetic rigid cystoscopy w/ hydrodistention, bladder biopsy, pelvic floor muscle testing, KCl sensitivity test, micturition diary, ICSI score list
- Treatment: Hydroxyzine, Amitriptyline, Nortriptyline, Pentosan polysulfate, Cimetidine, Cyclosporin A
  - Intravesical therapies: Pentosan polysulfate sodium (PPS), Dimethyl sulfoxide (DMSO), Botulinum toxin A plus hydrodistention, Hyaluronic acid, Chondroitin sulfate, Heparin, Lidocaine w/ Sodium bicarbonate
  - Other therapies include neuromodulation, bladder training, physical therapy, psychological therapy, sacral or pudendal nerve stimulation

Urethral Pain Syndrome

- Episodic pain that is chronic or recurrent, perceived in the urethra, & is without obvious local pathology
- May be a part of bladder pain syndrome; urethral pain may be a neuropathic hypersensitivity after a urinary tract infection
- Workup: Uroflowmetry, pelvic floor muscle testing, micturition diary
- Treatment: There is no specific treatment for urethral pain syndrome; patients are recommended to be treated in a multidisciplinary & multimodal program
  - For distressed patients, may consider a pain-relevant psychological therapy

A MULTIDISCIPLINARY TREATMENT

- A treatment approach in patients without a specific diagnosis that addresses dietary, psychological, social & environmental factors in addition to medical therapy
- A team of healthcare providers from different medical specialties (addictions, anesthesiology, gastroenterology, gynecology, physical medicine & rehabilitation, psychiatry, sleep medicine, urology) & allied health (clinical nutrition, kinesiology, nursing, occupational therapy, pharmacy, physiotherapy, psychology, social work) provides comprehensive assessment & integrated coordination of treatment interventions
- Treatment strategies consist of medical, surgical, psychosocial & rehabilitative interventions
  - Have been shown to have improved outcomes over medical therapy alone
  - Current evidence shows that it is the most effective treatment for patients w/ chronic pain syndrome

A MULTIDISCIPLINARY TREATMENT (CONT'D)

Exercise

- CPP due to myofascial dysfunction may be managed w/ a home stretching & exercise program
  - Corrects muscle weakness, tightness, & spasms

Physical Therapy

- Should be considered as a treatment option as different physical therapy modalities appear to help in the treatment of CPP eg high-voltage galvanic stimulation, ultrasound, heat & ice
- Helps treat the myofascial component of pelvic pain syndrome by inactivation of trigger points
  - Beneficial in women w/ bladder pain syndrome
- Also decreases referred pain

Psychotherapy

- Eg Cognitive therapy, behavioral modification, operant conditioning
- Addition of psychotherapy to the medical treatment of CPP appears to have an improved response over medical treatment alone
- Psychotherapy should be integrated into the treatment plan at an early stage
- Cognitive-behavioral therapies are effective for patients in developing strategies for coping w/ pain
  - Most widely used & has the most empiric support
  - Patients come to understand that their pain has physical, social & psychological causes & that it is possible to reduce pain through their efforts & w/ medical or surgical treatment

Biofeedback

- Musculoskeletal sources of pain are responsive to biofeedback training
- Biofeedback w/ physiological quieting & general relaxation are taught to patients w/ myofascial pelvic pain which control & decrease pain by decreasing muscle tension

Acupuncture, Acupressure, Transcutaneous Nerve Stimulation (TENS)

- TENS helps reduce somatic myofascial pain
- Acupuncture may be helpful in patients w/ myofascial pelvic pain & visceral-peritoneal pain
  - Beneficial effect may be from gate control of pain pathways, increased release of endogenous opioid, & alteration of sympathetic tone
- Acupressure had been approved for chronic pain relief in oncology patients

Surgical/Invasive Treatments

- Eg Adhesiolysis, hysterectomy, neurectomy
- The symptomatic effect of surgical procedures for CPP relies on the modulation or interruption of the pelvic neural pain transmission
- Often successful if a related pathological finding is believed to be the possible cause of the symptoms even at the clinical stage

Neuroablation

- Eg Chemical neuroablation, radiofrequency thermocoagulation, pulsed or cooled radiofrequency, cryoneurolysis
- Used for abdominal wall or pelvic floor neuralgia, it directly destroys neural tissue or alters neural conduction
- More studies are needed before this can be recommended

Neuromodulation

- Eg Sacral nerve stimulation, percutaneous tibial nerve stimulation, pudendal nerve stimulation
- A possible method for chronic pain relief, it should only be considered by specialists in pelvic pain management
- May be considered for bladder pain syndrome, pudendal neuralgia & chronic anal pain syndrome
- Gabaminergic interneurons are electrically stimulated leading to an exaggerated sensory information w/ consecutive modulation in the CNS eg spinal cord stimulation, sacral root stimulation, dorsal root ganglion stimulation, or peripheral nerve stimulation
- More detailed research is required

Transurethral Resection (Coagulation & Laser)

- May be considered in patients w/ bladder pain syndrome type 3C if conventional treatments are ineffective
- Reports suggest that transurethral laser results in prolonged alleviation of pain & urgency

Open Surgery

- Should only be considered for patients w/ bladder pain syndrome after all other therapies have failed
- Some reports suggest that cystectomy w/ ileal conduit formation or supratrigonal cystectomy w/ bladder augmentation may provide relief from bladder pain

B PHARMACOLOGICAL THERAPY

- Patients should be offered pain control w/ appropriate analgesia even if therapeutic maneuvers have not yet been initiated
  - Attempts should be made to empirically treat the pain & develop a management plan even if pain cannot be explained initially
  - Aim to provide the least complicated treatment that can improve functional capacity
- Consider involving trained physicians w/ expertise in chronic pain management at this stage
- Listed below are general treatments that should be used in a management plan w/a holistic approach including biological, psychological & social components
- Combination therapy often gives a greater benefit than agents used alone allowing for usage of lower doses thus minimizing the side effects
  - Lowest effective dose should be used if benefit is limited by side effects
- Simple analgesics are used initially then neuropathic agents if the former failed to provide adequate pain relief
  - If there is still no improvement, consider referral to a pain specialist

Analgesics

- Analgesics for CPP should not be used for a prolonged period of time

Paracetamol (Acetaminophen)

- An antipyretic analgesic w/ a central mechanism of action
- Has little evidence in the treatment of CPP but should be considered if not previously tried

Nonsteroidal Anti-inflammatory Drugs (NSAIDs)

- Anti-inflammatory & antipyretic analgesics that inhibit the cyclooxygenase enzyme
- Useful in painful conditions related to peripheral or inflammatory mechanisms
- NSAIDs should be considered for mild to moderate pain
  - NSAIDs are mostly recommended as first-line empiric therapy
- There is no good evidence to show that one NSAID is better than another for pelvic pain

Neuropathic Analgesics

- Agents that modulate centrally mediated pain which are taken regularly than as required
- Often used in combination, doses are titrated against benefit & side effects w/ the goal of improving patient's quality of life
- Side effects usually limit their use

Antidepressants

- Used to treat concomitant depression
- Treatment w/ antidepressants together w/ psychological support & other medical therapies may improve clinical outcomes

Tricyclic Antidepressants (TCAs)

- Amitriptyline is the most commonly used
  - Alternatives include Nortriptyline & Imipramine

Serotonin & Norepinephrine Reuptake Inhibitors (SNRIs)

- Eg Duloxetine, Venlafaxine
- Venlafaxine has evidence of benefit for chronic pain; use w/ caution in patients w/ heart disease

Selective Serotonin Reuptake Inhibitors (SSRIs)

- Eg Paroxetine, Sertraline
- Have fewer side effects but studies to show their benefit in pelvic pain are insufficient

Anticonvulsants

- Eg Gabapentin, Pregabalin
- Gabapentin inhibits excessive stimulation of the spinal cord's secondary neurons & is commonly used in the treatment of neuropathic pain
- A study suggests that Gabapentin provides significant pain relief when used alone or w/ Amitriptyline in women w/ CPP
- Common side effects include drowsiness, dizziness, & peripheral edema but are often tolerated by patients

B PHARMACOLOGICAL THERAPY (CONT'D)

Other Agents

- Considered after standard options have been tried & are best limited to specialists in pain management

Topical Capsaicin

- More convenient than other medications due to its topical application though skin sensitivity may not be well tolerated

Antipsychotics

- Have been previously used but a systematic review suggests further research on atypical antipsychotics

Opioids

- Opioids act on the dorsal horns of the spinal cord causing central inhibition of pain; & is used to treat chronic non-malignant pain
- Should only be used under the adequate supervision of a trained specialist
- Due to its adverse effects & potential for abuse, opioids may be given as maintenance therapy for CPP only when previous non-narcotic therapies have failed & if persistent pain is the major limitation to improved function
  - Opioid-induced hyperalgesia may happen wherein patients on opioids become more sensitive to painful stimuli thus limiting its use
  - Opioid rotation may be done wherein a patient experiencing significant side effects & inadequate pain relief w/ an opioid is given another agent that may be better tolerated
- Weak opioids are Codeine, Dihydrocodeine, & Tramadol; strong opioids are Morphine, Oxycodone, Fentanyl, & Hydromorphone
  - Morphine is the first-line opioid
  - Transdermal Fentanyl may be considered if oral preparations are restricted
  - Oxycodone may be better than Morphine in hyperalgesic states eg visceral pain
  - Tramadol has a dual mode of action w/ effects on opioid receptors & serotonin release

Local Anesthetic Injection

- Trigger points of the abdominal wall, vagina & sacrum may be injected w/ a local anesthetic to provide relief of CPP
- Has been reported to be effective for myofascial pelvic pain

Other Therapies

Botulinum Toxin Type A

- Inhibits release of acetylcholine at the neuromuscular junction & has a paralyzing effect on the striated muscles
- Injections into the muscles of the pelvic floor have demonstrated benefit
  - As a muscle relaxant, it can reduce the resting pressure in the muscles of the pelvic floor
- Has been successful in inactivation of trigger points because of its effect on muscle contraction
- Data on optimum dosage, technique & effect duration are lacking

Antibiotics

- Adjuvant therapy w/ antibiotics can be of supporting help in specific conditions

FOLLOW-UP

- Due to the multifactorial nature of CPP, diagnosis & treatment should always be reviewed to check for cases of treatment failure
  - May do re-evaluation & revision of treatment
  - Consider referral to a specialist if pain is still inadequately controlled
- Follow-up may be long term in patients w/ complex conditions
  - Pain specialists to give pain assessment, management & rehabilitation that are interdisciplinary & multispecialized
  - Provide specialized support & secondary care to patients w/ complex needs
  - Provide complex interventions eg medical & cognitive behavioral
  - Consider available pain management facilities w/ appropriate staff

Dosage Guidelines

ANALGESICS (NON-OPIOIDS)

Drug	Dosage	Remarks
Anilide Preparation		
Paracetamol (Acetaminophen)[1]	1000 mg PO 12 hrly	**Adverse Reactions** • Rash; Metabolic effects (increased Cl, uric acid & glucose; decreased Na, bicarbonate & Ca); Hematologic effects (anemia, blood dyscrasias); Hepatic effects (increased bilirubin & alkaline phosphatase, increased ammonia); Renal effects (nephrotoxicity w/ chronic overdose, analgesic nephropathy) **Special Instructions** • Use w/ caution in patients w/ renal dysfunction, severe liver damage. Concomitant use w/ Warfarin
Other Analgesic		
Floctafenine	400-600 mg PO 24 hrly **Max dose:** 1200 mg daily	**Adverse Reactions** • Allergic-type anaphylactic-like reactions, GI disorders, burning micturition, reversible acute renal insufficiency, drowsiness **Special Instructions** • Avoid occasional repeated administration • Avoid in patients w/ known hypersensitivity to glafenine or antrafenine, alone or in combination, associated treatment w/ beta-blockers, severe heart failure, CHD
Other Agent Used as Local Anesthetic		
Capsaicin	**Available strengths:** 0.0125% gel, lotion 0.025% gel, lotion 0.075% cream Apply thinly to affected areas 6-8 hrly	**Adverse Reactions** • Local irritation, temporary burning **Special Instructions** • Should not be applied to broken or irritated skin or mucous membranes • Treated area should not be exposed to heat or direct sunlight

[1]Combination w/ Tramadol is available. Please see the latest MIMS for specific prescribing information.

ANALGESICS (OPIOIDS)

Drug	Dosage	Remarks
Natural Opium Alkaloids		
Morphine sulfate	10-30 mg PO 4 hrly **or** **Without prior use of opioid:** Initially 10-15 mg PO **or** **Pain uncontrolled by weaker opioids:** Initially 20-30 mg PO 12 hrly Titrate dosage over following days to achieve 12-hr pain relief	**Adverse Reactions** • GI effects (N/V, constipation); CNS effects (somnolence, confusion, hallucination, euphoria); Other effects (resp & circulatory depression, resp & cardiac arrest, shock, sweating) **Special Instructions** • Use w/ caution in patients w/ renal or hepatic impairment, abdominal conditions, resp insufficiency, hypotension, shock, history of convulsions, CNS depression, hypothyroidism, anemia • Avoid in patients w/ acute hepatic disease, paralytic ileus, concomitant use w/ MAOI (or within 2 wk of use), hypersensitivity to opiate narcotic analgesics, diarrhea caused by poisoning, acute resp disease, resp depression • Tolerance may develop upon long-term use • Avoid abrupt withdrawal or administration of narcotic antagonist

All dosage recommendations are for non-elderly adults w/ normal renal & hepatic function unless otherwise stated.
Not all products are available or approved for above use in all countries.
Products listed above may not be mentioned in the disease management chart but have been placed here based on indications listed in regional manufacturers' product information.

Specific prescribing information may be found in the latest MIMS.

Dosage Guidelines

ANALGESICS (OPIOIDS) (CONT'D)		
Drug	**Dosage**	**Remarks**
Natural Opium Alkaloids (Cont'd)		
Oxycodone[1]	**Opioid-naive patients:** 10 mg PO 12 hrly **Renal or hepatic impairment:** 5 mg PO 12 hrly Titrate dose carefully, as frequently as once a day if necessary, to achieve pain relief	**Adverse Reactions** • Resp effects (bronchospasm, dyspnea); GI & CNS disturbances; Other effects (pharyngitis, voice alteration, orthostatic hypotension, rash, sweating, pruritus, fever, chills) **Special Instructions** • Use w/ caution in patients w/ chronic pulmonary, renal/hepatic disease, history or tendency for drug abuse, chronic nonmalignant pain, hypothyroidism, raised intracranial pressure, hypotension, biliary tract disease • Avoid in patients w/ acute resp depression, cardiac arrhythmias, paralytic ileus, suspected surgical abdomen, severe renal impairment, acute alcoholism, increased cerebrospinal or intracranial pressure, convulsive disorders, concurrent MAOIs (or within 2 wk) • Tolerance & physical dependence may develop • Avoid abrupt cessation of prolonged use
Phenylpiperidine Derivative		
Fentanyl	Individualized based upon the medical status & opioid history of the patient & should be assessed at regular intervals after application **Opioid-naive adult:** Use the lowest dose as the initial dose & not exceed 25 mcg/hr Titrate dose at 12 or 25 mcg/hr, if required	**Adverse Reactions** • GI effects (N/V, constipation); CNS effects (somnolence, confusion, headache, hallucination, euphoria); Cardiac effects (hypotension, bradycardia); Other effects (pruritus, sweating, urinary retention, rash, erythema, hypoventilation) **Special Instructions** • Patch should be replaced every 72 hr • Use w/ caution in patients w/ hepatic & renal dysfunction, pulmonary disease, bradyarrhythmias, increased intracranial pressure. Fever/external heat application • Avoid in patients w/ significant resp depression, acute/severe bronchial asthma, patients who have or suspected of having paralytic ileus, short-term states of pain, bradycardiac dysrhythmias, severely impaired CNS function. Not for acute or post-op pain • Patients who experienced serious adverse events should be monitored for up to 24 hr after patch removal. Do not switch from 1 transdermal patch system to another without proper evaluation & supervision. Do not cut the patches

[1]Combination w/ Naloxone HCl is available. Please see the latest MIMS for specific prescribing information.

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Dosage Guidelines

ANALGESICS (OPIOIDS) (CONT'D)

Drug	Dosage	Remarks
Other Opioid		
Tramadol[1]	50-100 mg PO 8-12 hrly **Severe pain:** Initially 100 mg PO **Max dose:** 400 mg/day ***or*** 50-100 mg IM or IV over 2-3 min 4-6 hrly **Max dose:** 400 mg/day	**Adverse Reactions** • GI effects (N/V, constipation, dry mouth, biliary spasm, heartburn, appetite changes); CNS effects (drowsiness, confusion, hallucinations, seizures, fatigue, headache, changes in mood, muscle weakness, restlessness); Cardiac effects (bradycardia, palpitations, orthostatic hypotension); Other effects (skin reactions, facial flushing, sweating, hypothermia, miosis, allergic reactions, micturition disorder) **Special Instructions** • Use w/ caution in patients w/ severe hepatic & renal function impairment, resp disorders, hypothyroidism, increased intracranial pressure, patients prone to convulsive disorders or in shock • Avoid in patients w/ resp depression especially in presence of cyanosis & excessive bronchial secretions, acute alcoholism, head injuries, conditions in which intracranial pressure is raised, heart failure secondary to chronic lung disease, hypnotics, analgesics or psychotropics, narcotic withdrawal treatment • Possibility of tolerance, psychic & physical dependence w/ long-term use

[1]Combination w/ Paracetamol is available. Please see the latest MIMS for specific prescribing information.

ANTICONVULSANTS

Drug	Dosage	Remarks
Gabapentin	**Initial dose:** **Day 1**: 300 mg PO 24 hrly **Day 2:** 300 mg PO 12 hrly **Day 3:** 300 mg PO 8 hrly Based on patient response & tolerability, may increase dose in increments of 300 mg/day every 2-3 days up to a max dose of 3600 mg/day **Max dose:** 3.6 g/day	**Adverse Reactions** • CNS effects (somnolence, dizziness, ataxia, nystagmus, headache, tremor, diplopia, amblyopia); Other effects (fatigue, nausea &/or vomiting) **Special Instructions** • Use w/ caution in patients w/ history of psychotic illness, renal impairment • Discontinuation &/or addition or substitution of alternative therapy should be gradual over at least 1 wk • May affect patient's ability to drive or operate machinery
Pregabalin	**Initial dose:** 150 mg/day PO divided 8-12 hrly May be increased to 300 mg/day after a 3-7 day interval May increase further to max dose after another 7-day interval **Max dose:** 600 mg/day	**Adverse Reactions** • CNS effects (somnolence, dizziness, confusion, euphoric mood, ataxia, attention disturbance, abnormal coordination, memory impairment, tremor, dysarthria, paresthesia, blurred vision, diplopia, vertigo, dry mouth, increased appetite, decreased libido, irritability); GI effects (constipation, vomiting, flatulence); Other effect (fatigue) **Special Instructions** • Use w/ caution in patients w/ galactose intolerance, lactase deficiency or glucose-galactose malabsorption, renal impairment, DM • May affect patient's ability to drive or operate machinery

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Dosage Guidelines

ANTIDEPRESSANTS		
Drug	**Dosage**	**Remarks**
Serotonin & Norepinephrine Reuptake Inhibitors (SNRIs)		
Duloxetine	60 mg PO 24 hrly **Max dose:** 120 mg/day	**Adverse Reactions** • CNS effects (somnolence, dizziness, insomnia, nervousness, nausea, xerostomia, wt loss, anorexia, sexual dysfunction, anxiety); GI effects (constipation, diarrhea); Other effects (abnormal dreams, yawning, tremor, blurred vision, increased sweating) • Dose-related: Vasodilation, hypertension **Special Instructions** • Start w/ low dose to minimize side effects & titrate upward to the desired response • Use w/ caution in renal & hepatic impairment • Do not stop medication abruptly; taper dose over several wk
Venlafaxine	**Initial dose:** 37.5 mg PO 12-24 hrly Increase dose by 37.5-75 mg/day on a wkly interval **Max dose:** 225 mg/day	
Tricyclic Antidepressants (TCAs)		
Amitriptyline	**Initial dose:** 10-50 mg PO at bedtime Increase dose by 25 mg/day to max dose on a wkly interval **Max dose:** 150 mg/day	**Administration** • Total daily dose should be given at bedtime **Adverse Reactions** • Side effects are mostly due to antimuscarinic actions & may be decreased if started at low dose & increased gradually • Dry mouth, constipation (may lead to paralytic ileus), blurred vision, increased intraocular pressure, urinary retention, hyperthermia, drowsiness can occur, nervousness, insomnia, headache, peripheral neuropathy, ataxia, tremor, confusion/delirium can occur especially in older patients, N/V, gastric irritation, hypotension, tachycardia, sweating, wt gain **Special Instructions** • Start w/ a low dose to minimize side effects & titrate upward to the desired response • Use w/ caution in patients w/ urinary retention, chronic constipation, untreated angle-closure glaucoma, patients w/ CV disease, history of epilepsy, DM, impaired hepatic function • Not recommended for elderly patients & those w/ CV disease • Do not stop medication abruptly; taper dose over several wk
Nortriptyline	**Initial dose:** 10-25 mg PO at bedtime Increase dose by 25 mg/day to max dose on a wkly interval **Usual dose:** 75 mg PO as single bedtime dose or divided 12 hrly	

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Dosage Guidelines

ANTISPASMODICS

Drug	Dosage	Remarks
Fenoverine	100 mg PO 8 hrly May increase up to 200 mg 12 hrly	**Adverse Reactions** • Myalgias, reversible rhabdomyolysis, gastric upset **Special Instructions** • Use w/ caution in patients >60 yr or w/ multiple drug therapy • Avoid in patients w/ active or history of chronic liver disease, history of hyperthermia during or after anesth or physical effort, mitochondrial myopathy, renal insufficiency
Tiropramide	100 mg PO 8-12 hrly	**Adverse Reactions** • Seldom N/V, mouth dryness, constipation, allergic reactions **Special Instructions** • Avoid in patients w/ stenosis of mechanical source of the gastrointestinal tract, megacolon, circulatory failure, hypersensitivity to Tiropramide

NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDs)

Drug	Dosage	Remarks
Acetic Acid Derivative		**Adverse Reactions** • GI effects (nausea, GI discomfort, diarrhea, peptic ulceration, GI bleeding); CNS effects (headache, vertigo, dizziness, nervousness, tinnitus, depression, drowsiness, insomnia); Hypersensitivity reactions (angioedema, bronchospasm, rashes, Stevens-Johnson syndrome occur rarely); Hematologic effects (anemia, thrombocytopenia, neutropenia); Other effects (hepatotoxicity, nephrotoxicity, hematuria, fluid retention, photosensitivity, pancreatitis) • Coxibs have lesser GI effects **Special Instructions** • May be given w/ food to decrease GI effects • Avoid use in patients w/ active peptic ulceration, severe heart failure, history of allergy to Aspirin or other NSAIDs - Coxibs should not be used in patients w/ moderate heart failure, ischemic heart disease, peripheral arterial disease, cerebrovascular disease • Use w/ caution in patients w/ hypertension, infections, asthma or allergic disorders, hemorrhagic disorders, hepatic or renal impairment - Coxibs should be used w/ caution in patients w/ left ventricular failure, edema, history of cardiac failure, w/ risk factors for developing heart disease
Sulindac	400 mg PO 24 hrly	
Coxib		
Etoricoxib	60 mg PO 24 hrly	
Fenamic Acid Derivative		
Mefenamic acid	250-500 mg PO 8 hrly or initially 500 mg PO then 250 mg PO 6 hrly as required	
Propionic Acid Derivatives		
Ketoprofen	50-100 mg IM 4 hrly up to a max of 200 mg/24 hr	
Naproxen	Initially 500-550 mg PO then 250-275 mg PO 6-8 hrly **Max dose:** 1250-1375 mg/day	

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Dosage Guidelines

NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDs) (CONT'D)

Drug	Dosage	Remarks
Pyrazolone Preparation		
Metamizole sodium (Dipyrone)	500 mg PO 6-8 hrly ***or*** 1000-2500 mg IM/IV 24 hrly	**Adverse Reactions** • Resp effects (dyspnea, bronchospasm); Cardiac effects (cardiac arrhythmia, hypotension & circulatory shock); Other effects (rarely anaphylactic/anaphylactoid reactions, severe angioedema, blood dyscrasia, mucosal symptoms, rash, oliguria, anuria or proteinuria, pain or local reactions at inj site) **Special Instructions** • Use w/ caution in patients w/ incidence of Metamizole-induced agranulocytosis w/ an immunoallergic origin lasting for at least 1 wk, instability of blood circulation, blood coagulation disorders, bronchial asthma, chronic resp tract infections, renal or hepatic impairment, chronic urticaria. Prolonged & intensive usage • Avoid in patients w/ pyrazolone allergy, hepatic porphyria or congenital G6PD deficiency, impaired bone marrow function or diseases of the hematopoietic system, bronchospasm or other anaphylactoid reaction to analgesics, acute intermittent hepatic porphyria. Parenterally in patients w/ hypotension or unstable hemodynamics

OTHER DRUGS ACTING ON THE GENITO-URINARY SYSTEM

Drug	Dosage	Remarks
Pentosan polysulfate sodium	**Bladder pain syndrome:** 100 mg PO 8 hrly	**Adverse Reactions** • GI effects (nausea, diarrhea, abnormal LFTs, abdominal pain, rectal hemorrhage, dyspepsia); Dermatologic effects (alopecia, skin necrosis); CNS effects (headache, drowsiness); Other effects (osteoporosis w/ prolonged use, hyperkalemia, pelvic pain) **Special Instructions** • Use w/ caution in patients w/ renal or hepatic impairment, spleen disorders, hemorrhagic blood disorders, thrombocytopenia, peptic ulcer disease, cerebrovascular disorders, bacterial endocarditis, severe hypertension or esophageal varices, post-surgery • Monitor patients every 3 mth during treatment • Avoid in patients w/ active hemorrhage, serious renal/hepatic impairment

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