Pain Management for Primary Care

Series: Fifteen
Chronic Abdominal and Pelvic Pain

Module 15-1
Viseral Pain

Module 15-1

Viseral Pain

By the end of the module, you will be able to:

- Differentiate between acute and chronic visceral pain.
- Describe common visceral pain disorders.
- Understand the underlying pathophysiology of visceral pain.
- Determine how to choose visceral pain treatments.

We will review:

Topic One: Visceral Pain Syndromes

Topic Two: Visceral Pain Evaluation

Topic Three: Visceral Pain Treatment Options

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Topic One

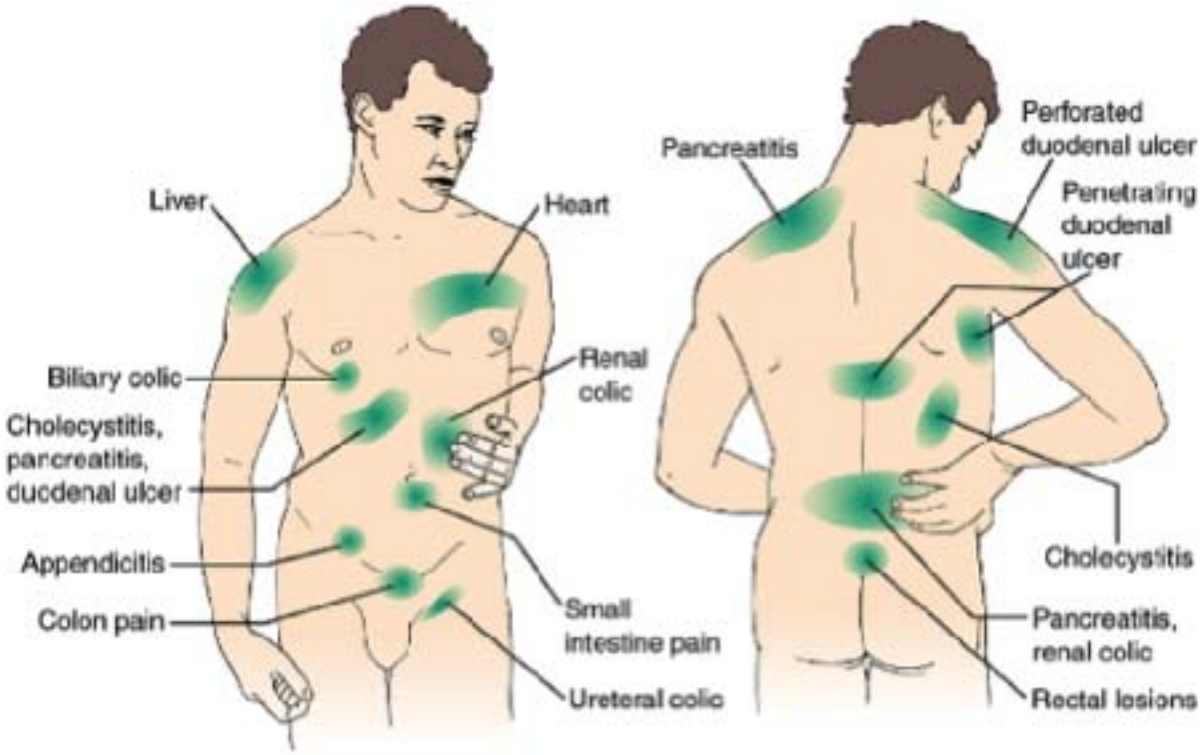
Visceral Pain Syndrome

Acute visceral pain is a Red Flag condition.

- Acute visceral pain is a consequence of a diseased organ.
- Differential diagnosis includes Ischemic cardiac disease, Pneumonia, Pulmonary Embolus, Esophagitis, Cholecystitis, Pancreatitis, Pyelonephritis, Ureteral calculi, Ovarian cyst, Pelvic Inflammatory Disease , Urinary Tract Infection, Bacterial Prostatitis
- It is often accompanied by nausea, vomiting, sweating, cramping, and hypotension.

Notes

Recall that most visceral pain is referred:



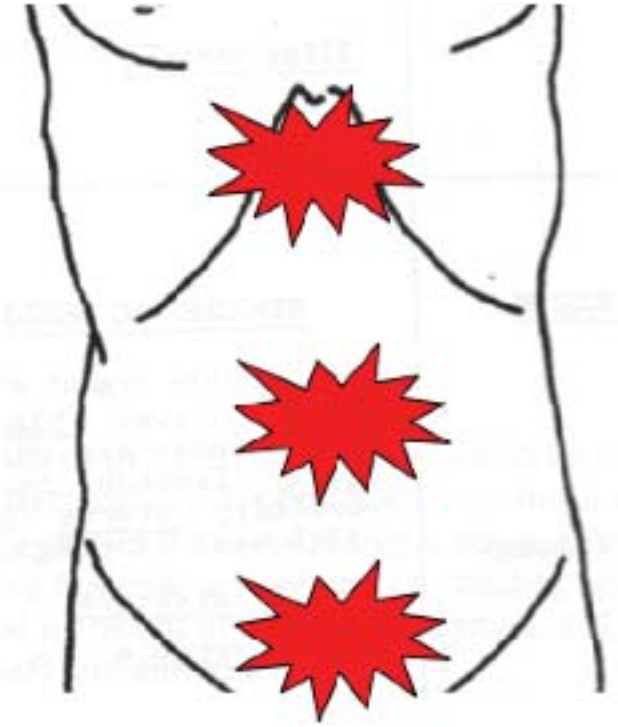
Notes

Please show that visceral pain can refer to the shoulder, chest , back, flank, and groin.

Differential diagnosis for chronic visceral pain includes:

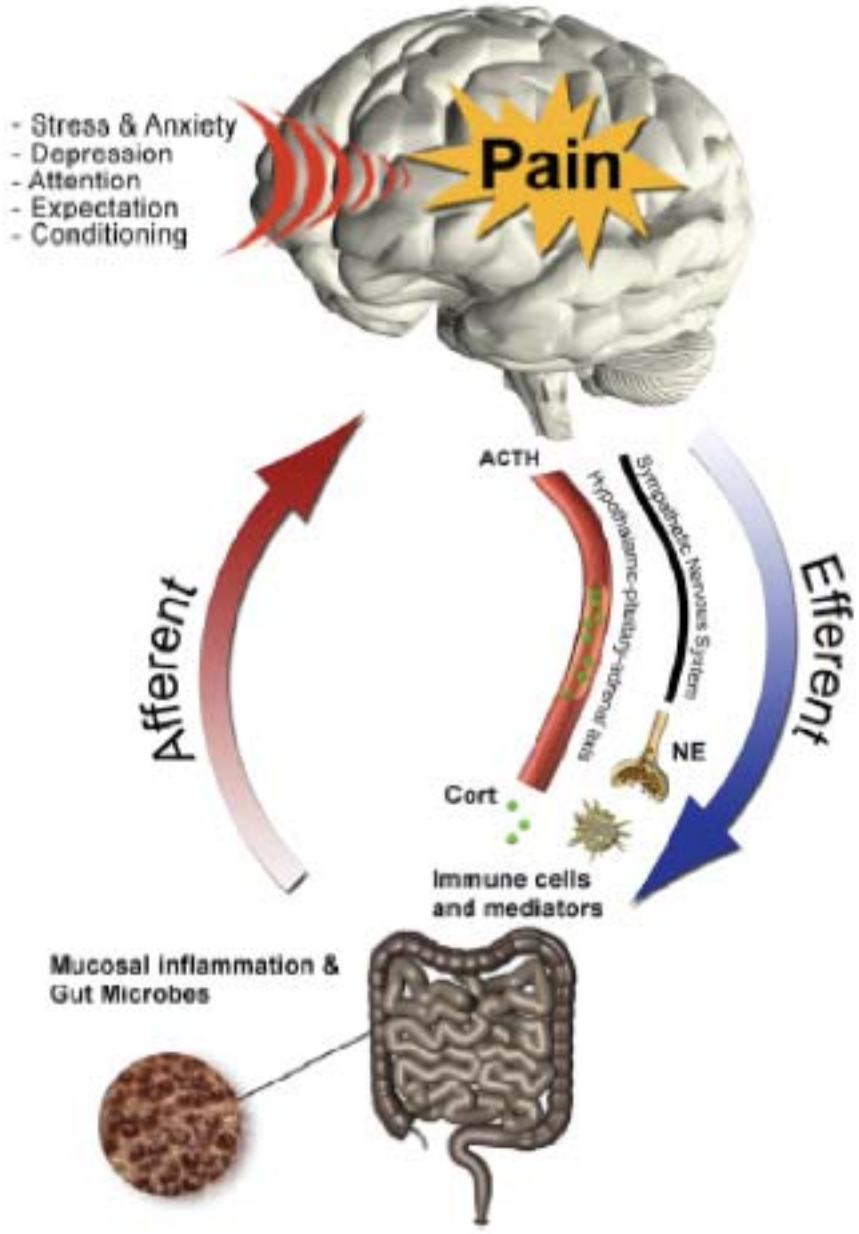
Location

- Upper abdominal
  - Biliary
  - Pancreatic
  - Ulcer
  - Dyspepsia
- Mid abdominal
  - Crohn's disease
  - Celiac disease
  - Partial intermittent SBO
  - Chronic mesenteric ischemia
- Lower abdominal
  - IBS
  - Colitis



Notes

Chronic visceral pain causes a stress response that changes mood and function.



Notes

Please show the efferent arrow shows the stress response caused by visceral pain (cortisol goes up). This causes changes in the gut and this causes changes in the brain that result in anxiety and depression (afferent arrow).

Pain is also extremely prevalent among Servicemembers and Veterans.

- Recurrent physical abuse
- Recurrent emotional abuse
- Contact sexual abuse
- An alcohol and/or drug abuser in the household
- An incarcerated household member
- Someone who is chronically depressed, mentally ill, institutionalized, or suicidal
- Mother is treated violently
- One or no parents
- Emotional or physical neglect

Notes

This is the most important slide of the presentation. It is absolutely necessary to identify and treat the psychological consequences of these events.

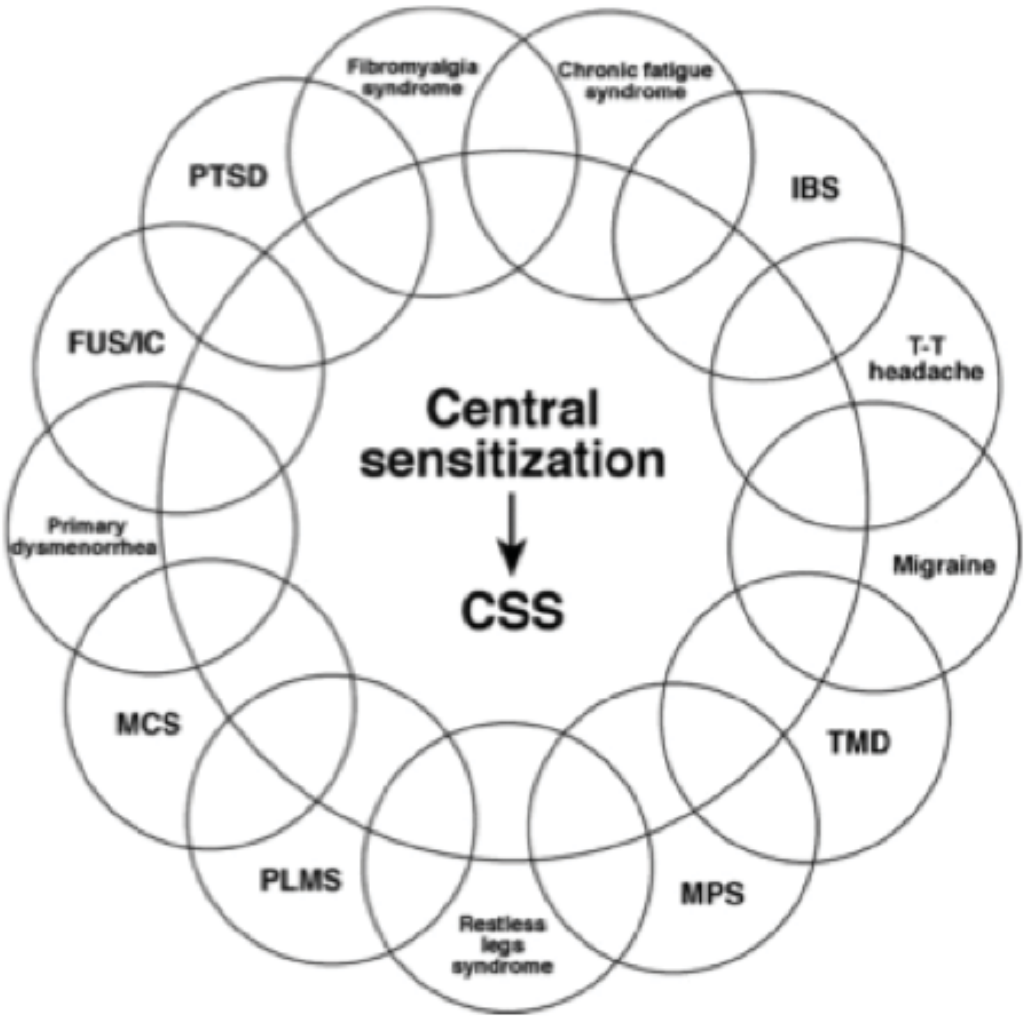
Chronic visceral pain worsens with:

- Depressed affect, suicide attempts
- Multiple sexual partners, sexually transmitted diseases
- Smoking and alcoholism
- Social, emotional, cognitive impairment
- Adoption of health/risk behaviors
- Disease, disability, and social problems
- Early death within your immediate support system

Notes

This is the most important slide of the presentation. It is absolutely necessary to identify and treat the psychological consequences of these events.

Chronic visceral pain is rarely the sole disease.



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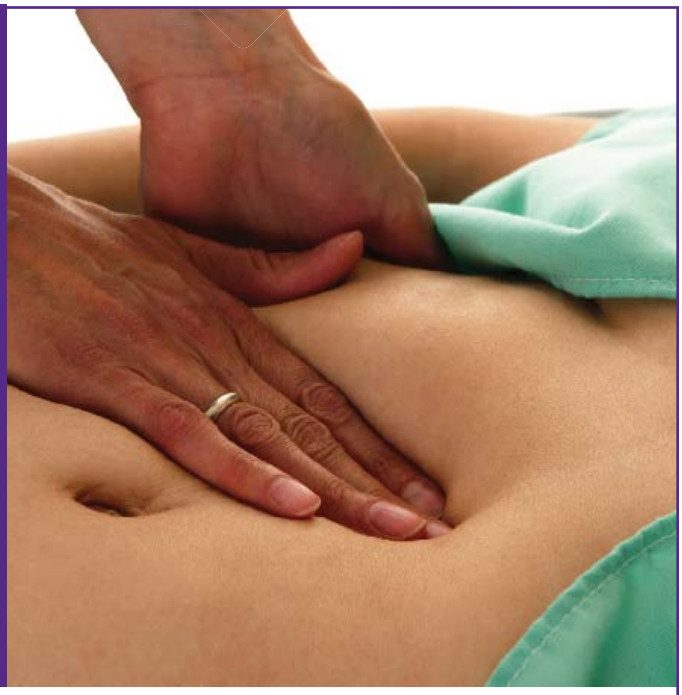
Topic Two

Visceral Pain Evaluation



Remember the OPQRSTU mnemonic:

Onset of pain

Provocation/Palliation

Quality/Character

Region/Radiation

Severity/Intensity

Timing (continuous, intermittent)

U You/Impact

Notes

A comprehensive medical history is necessary

- Ask about previous consultations, diagnostic imaging, diagnostic procedures
- Ask about previous treatments and outcome details of:
  - Medications
    - Effects, side effects, dose, duration of use
  - Procedures
    - Degree and duration of benefit, side effects
  - Surgeries
    - Indication for surgery and results

Notes

Then continue with a meticulous physical exam, labs, and imaging.

- Record vital signs, Cardiovascular, Pulmonary and Abdominal Pelvic exam.
- Think of shared segmental visceral afferents projections like:
  - T-5: Cardiac/Pulmonary/Esophageal/Hepato-biliary
  - T-10/L-1: Colonic/Renal/Uterine-Prostatic
- Order CBC, LFTs, amylase, CRP, UA, consider urine HCG in bearing age women, EKG.
- Consider relevant imaging.

Notes

In this stage the goal is to rule out any structural pathologies like polyps, tumors, endocrine, autoimmune and infectious disorders that may cause visceral pain

If all the labs and imaging tests are normal consider a functional GI tract syndrome like:

- Irritable Bowel syndrome: mostly women, 3 days/month for at least 3 months with constipation or diarrhea.
- Epigastric pain syndrome: 3 month intermittent epigastric pain without structural abnormalities.
- Functional dyspepsia: as above with early satiation.
- Functional abdominal pain syndrome is continuous pain, unrelated to food intake with normal imaging, including endoscopy.

Notes

Functional (not structural) disorders include:

Digestive Abnormalities

1. Impairment of gastrointestinal mobility with delayed gastric emptying
2. GI accommodation is reduced in approximately 40% of individuals
3. Postprandial antral hypomotility
4. Gastric dysrhythmias

Psychological Features

1. High association with psychopathological factors
2. Especially anxiety disorders

Gastric hypersensitivity

1. Increased intestinal sensitivity observed in response to balloon dilation or duodenal acid/lipid infusions
2. Subset of patients with spontaneously increased duodenal acid exposure resulting in increased symptom intensity

By the end of the module, you will be able to:

- Recognize the prevalence of pain and its impact on individuals and society.
- Discuss the historical context of the current cultural transformation in pain care.
- Explain three components of the pain experience: Sensory, Emotion, and Cognitive

We will review:

Topic One: International Association for the Study of Pain®

Topic Two: Modern Understanding of Pain

Treatment for acute and chronic visceral pain are very different:

Acute pain treatment is different. Opioids can be considered for short term.

- Chronic visceral pain requires a team approach and include:
  - Self-management
  - Nutrition/Fitness
  - Mindfulness
  - Physical Therapy (i.e Pelvic floor)
  - Cognitive Behavior Therapy
  - Acupuncture
  - Neuropathic adjuvant therapy like:
    - Tricyclic antidepressants
    - Antiepileptics
    - Opioids and benzodiazepines are to be avoided.

Notes

Nutritional changes are important and include:

- Take a dietary history
- Reduce high fat foods and caffeine
- Increase raw fruits, vegetables,
- Eliminate lactose, fructose, and sorbitol
- Rule out allergies to wheat (gluten), milk, yeast, egg, and nuts
- Increase fiber if constipation is predominant

Notes

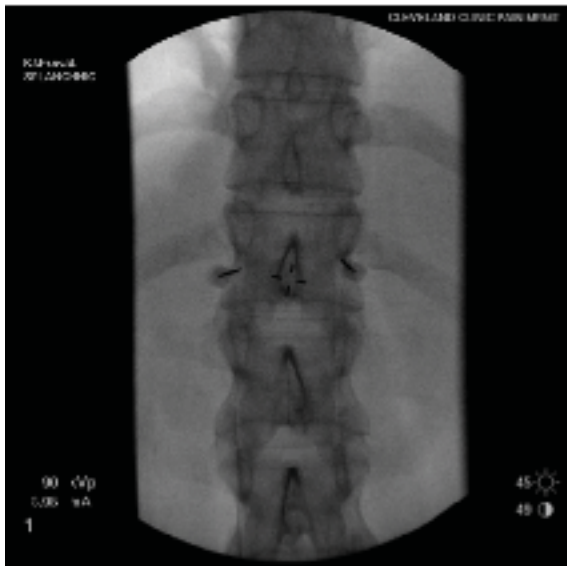
Dietary changes are frequently over looked, however they are most important component in treating chronic visceral pain.

1. Dietary intolerance may play a substantial role in symptom management.
2. True food allergies may be present or simple changes in food components may lead to improvement.
3. Nutrition consultation may be of benefit.

Adjuvant Treatments Include

Membrane stabilizers for pain control	Starting dose/day	Target dose/day	Side effects
Carbamazepine Tegretol®	200	600-1200	Sedation, ataxia, diplopia leukopenia, ↓Na^+
Valproate Depakote®	400-500	1000-3000	weight ↑, ↓plt, liver failure
Pregabalin Lyrica®	75	300-600	weight ↑
Gabapentin Neurontin®	100-300	1800-3600	weight ↑, headache, twitching
Lamotrigine Lamictal®	50	300-500	rash, Stevens-Johnson sdme
Levetiracitam Keppra®	1000	3000	recurring infections
OxcarbazepineTrileptal®	300	600-2400	↓Na^+
Tiagabine Gabitril®	4	32-56	nervousness, flu-like symptoms
TopiramateTopamax®	25-50	200-400	weight ↓, renal calculi
Zonisamide Zonegran®	100	600	weight ↓, renal calculi

If chronic visceral pain is refractory to medical management consider referring to a specialist.



A specialist most probably will consider the following treatment:

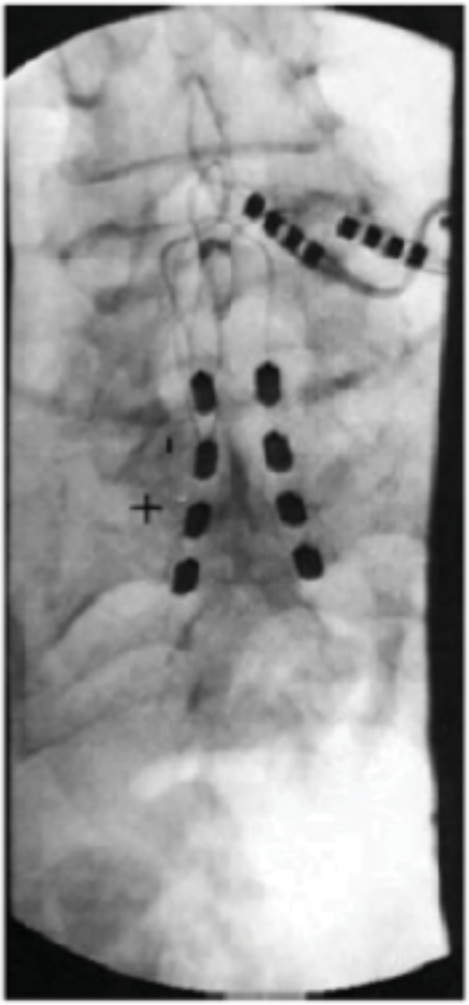
- First line of treatment are sympathetic nerve blocks:
  - Splanchnic Nerve block
  - Celiac plexus block
- Second line would be a trial of IV regional anesthetics: (Ketamine, Lidocaine, bretylium, phentolamine)
- Third line would be implanting epidural catheters that deliver local anesthetics, clonidine, opioids.
- These procedures carry a low, but not uncommon risk of bleeding, infection, organ puncture and increased pain, especially if neurolytic agents (alcohol, glycerol, radiofrequency) are used.

Notes

Specialists that might perform image guided procedures include pain specialists, radiologists, gastroenterologists, and neurosurgeons.

Neurostimulation techniques like spinal cord or peripheral nerve stimulation done by specialists are promising in select cases.

- Neuromodulation techniques may improve visceral function (cardiac, gut, bladder) as well as relieve pain.



Notes

Knowledge Check

Which of the following statements is FALSE:

a. Only acute visceral pain can be referred pain

b. In addition to a meticulous history and physical exam it is important to look for signs of adverse childhood events.

c. Most chronic visceral pain patients require a team approach that includes adjuvant medication, fitness and nutrition, self management and mind body therapies.

d. Neuromodulation may provide improved organ function and quality of life in a select group of patients.

Knowledge Check – Answer

Which of the following statements is FALSE:

a. Only acute visceral pain can be referred pain

b. In addition to a meticulous history and physical exam it is important to look for signs of adverse childhood events.

c. Most chronic visceral pain patients require a team approach that includes adjuvant medication, fitness and nutrition, self management and mind body therapies.

d. Neuromodulation may provide improved organ function and quality of life in a select group of patients.

Notes

Read question aloud

Summary

Recall that acute and chronic visceral pain are assessed and treated differently. Chronic visceral pain is rarely the sole disease .

Ask for adverse childhood events (ACE) and look for depression, anxiety, and PTSD as they are often significant.

Chronic visceral pain is best treated with adjuvant medications, self management, proper nutrition, and mind-body approaches.

The use of sedatives and opioids should be avoided and image guided procedures, in particular neuromodulation, may be helpful in improving organ function in refractory cases.

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