Chronic Abdominal Pain

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Disclosures

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Abdominal Pain - Definitions

- Acute – occurring for several days
- Chronic – occurring intermittently or constantly for 3 - 6 months
- Subacute – everything in between
Historical Features

- Location, Location, Location
- Radiation
- Character (Lancinating v Dull)
- Intensity probably less important – more on this later!
- Timing in relation to meals
- Aggravating/alleviating factors (especially in relation to food, defecation, or menstruation)
- Associated features (vomiting, diarrhea, constipation)
- Alarm Features
Alarm Features

- Dysphagia
- Weight loss, new clothes
- Early satiety (?)
- Persistent nausea with vomiting
- Hematemesis, hematochezia, melena
- Family history of cancer or IBD
- Iron deficiency anemia (or sometimes B12 deficiency)
- Nocturnal symptoms or incontinence (especially for diarrhea)
- Age of onset greater than 50 years
Pain Sensitive Structures

- Skin
- Muscles/Fascia
- Serosa
- Viscera
Pain Mechanisms

- Inflammation
- Neuropathy
- Distension/Stretch
- Torsion
- Ischemia
- Functional
Abdominal Anatomy
Chronic Abdominal Pain Concept Map
Skin and Myofascial Pain

- Diabetic Neuropathy
- Neuropathic
- Post-herpetic Neuralgia
- Nerve Entrapment
- Fibromyalgia
- Functional
- Myofascial Pain Syndrome
Visceral Pain Concept Maps

- Periumbilical and Lower Abdominal Pain
  - Neoplasia
  - Diverticulitis
  - Adhesions
  - Torsion and Distension
  - Ischemia
  - Inflammation
  - Functional
  - Eosinophilic Enteropathy
  - Acute mesenteric ischemia
  - Mesenteric ischemia
  - Omental infarction
  - Malrotation
  - Internal Hernia
  - Volvulus
  - Malabsorption

- Neurogenic

- Visceral Pain

- Psychogenic

- Neuropathic
Visceral Pain Concept Maps
Exam Features

- Patient position (constantly changing v still)
- Inspection – Scars, skin changes
- Palpation – skin, deep palpation for organomegaly or masses
- Percussion – with shifting
- Auscultation – bruits
- Maneuvers – Carnett sign
Evaluation

• Labs: CBC, CMP, Lipase (?), CRP, H pylori evaluation, TTG IgA, Total IgA
• Subsequent Labs: Calprotectin, B12, Ferritin, Iron Profile
• Endoscopy, CT, MRP: typically only for alarm features or other laboratory abnormalities
Diagnoses to Always Consider

- Malignancy
- Inflammatory Bowel Disease
Questions so far?
Functional Abdominal Pain Syndrome

- Rome III Criteria (all of the following)
  - Continuous or almost continuous abdominal pain
  - No or only occasional relationship of pain to physiologic events (defecation, eating, menses)
  - Some loss of daily functioning
  - Pain is not feigned
  - Insufficient symptoms to meet criteria for another functional gastrointestinal disorder that would explain the pain

*Criteria fulfilled for the past three months with symptom onset at least six months prior to diagnosis*
Irritable Bowel Syndrome

• Rome III Criteria
  • Recurrent abdominal pain or discomfort at least three days/month in the last three months associated with two or more of the following:
    • Improvement with defecation
    • Onset associated with a change in the frequency of stool
    • Onset associated with a change in the form of stool
  • Divided into diarrhea-predominant, constipation-predominant, and mixed
Neuroanatomic Pathways

IBS - ascending visceral pain pathway

Descending visceral pain pathway

Primary somatosensory cortex

Spinomesencephalic

Spinoreticular

Dorsal reticular nucleus

Colon

ACC

Thalamus

Amygdala

PAG

Rostral ventral medulla

Opioidergic

Noradrenergic

Serotonergic

Vestibular nuclei

Central autonomic network

Spinal cord
Mediators of Functional Diseases

• Visceral hypersensitivity and cortical processing
• Intestinal microbiome
• Malabsorbed or maldigested nutrients
• Intracolonic bile acids
• Intestinal motility
• Mucosal permeability
• Relative concentrations of neurotransmitters (serotonin)
Biomedical model of Gastrointestinal Illness

• Illness can be linearly reduced to a single cause (reductionism)
  • Therefore, identifying and modifying the underlying cause is necessary and sufficient to explain the illness and ultimately lead to cure.

• Illness can be dichotomized to a disease, or organic disorder, which has objectively defined pathophysiology, or a functional disorder, which has no specifically identifiable pathophysiology (dualism)
Biopsychosocial model of Gastrointestinal Illness
Influencers of disease severity in IBS

Figure 2

Peripheral and brain-gut influences on severity in irritable bowel syndrome

Note: Psychosocial factors play a key role in the etiology of irritable bowel syndrome (IBS), especially at the more severe end of the spectrum. This figure shows how peripheral and brain-gut influences affect the severity of IBS, from the mild on left to severe on right.

Treatment Principles for Functional Gastrointestinal Diseases

• Establishing therapeutic relationship with patients (biopsychosocial model)
• Establishing appropriate expectations
• Communicating the role of psychosocial factors, if present
• Reinforcing healthy behaviors (exercise, sleep, diet)
• Pharmacologic therapy
• Behavioral treatments (CBT)
• Avoiding furor medicus if possible
Pharmacotherapy for Functional Abdominal pain

• Tricyclic antidepressants – primarily work by modulating descending pathways to mitigate pain; aid with depression at higher doses
• SSRIs – less-extensively studied; help with comorbid psychiatric conditions
• SNRIs

• Drugs to avoid
  • Opiates – even if your patient tells you this is the only thing that works
  • Benzos
Pharmacotherapy for IBS-C

- OTC
  - Psyllium
  - PEG (Miralax)
  - Bisacodyl (Dulcolax) – not approved, probably would avoid this one
  - Docusate
  - Linaclotide – higher doses for IBS
  - Lubiprostone – chloride channel activator (approved at lower dose for IBS-C in women)
  - Bile salt binders (Cholestyramine)
Pharmacotherapy for IBS-D

• OTC
  • Loperamide (Mu-opioid agonist)
  • Bismuth subsalicylate (anti-bacterial, anti-secretory, anti-inflammatory)
• Eluxadoline (Mixed-opioid receptor modulator)
• Diphenoxylate/atropine (Mu-opioid agonist and anticholinergic)
• Hyoscine and Dicyclomine (anticholinergic)
• Rifaximin (non-absorbable antibiotic)
Questions?
References


