Functional GI Disorders and Their Overlap with Pelvic Pain Syndromes

Dr. Christie Heller
Denver Health and Hospital
j.christie.heller@dhha.org

*I have no disclaimers.

Objectives:
1. Describe the various functional gastrointestinal disorders and their basic treatment
2. Demonstrate an understanding of the evaluation of GI complaints and when to refer to a gastroenterologist
3. Understand the biopsychosocial factors underlying GI functional disorders and how these disorders overlap with pelvic pain syndromes.

• Definition of Functional GI Disorders (FGIDs)
  o Recurring and persistent symptoms that occur b/c of abnormal functioning of the GI tract
  o Not caused by structural or biochemical abnormalities
  o Disorders of brain/gut interaction
  o Testing usually doesn’t give a cause
  o Disorders are very common, most patients don’t seek care

• FGIDs have a large impact on public health
  o Disabling
  o High financial burden
  o Family and workplace disruption
  o Associated comorbidities, psychiatric issues
  o Higher morbidity/? Mortality: higher rates of cholecystectomy, appendectomy, and hysterectomy in IBS patients compared to controls (Longstreth GF et al. Irritable bowel syndrome and surgery: a multivariate analysis. Gastro 2004; 126: 1665-73.).

• Rome IV is the classification system for FGIDS
  o Recently launched, published in May issue of Gastroenterology,
  o Classification system that defines the FGIDs and classifies them based on symptoms and anatomic location.
  o Emphasizes that they are disorders of GUT-BRAIN interaction
  o Table with the 33 adult FGIDS shown below
  o 6 anatomic regions that the disorders are classified in: esophageal, gastroduodenal, bowel disorders (colon, includes IBD), centrally mediated disorders of GI pain, gallbladder disorders and anorectal disorders. Within each anatomic region they are classified based on predominant symptom
• Biopsychosocial Conceptual Model
  o Relationship between early life factors and psychosocial factors as well as the physiology of the gut/brain and their interaction
  o These factors influence the presentation and outcome of the FGIDs
  o FGIDs in turn loop back and affect physiology and psychosocial factors

• Esophageal disorders:
  o Typical symptoms: heartburn, chest pain, dysphagia, odynophagia, globus
  o When to refer: alarm symptoms including weight loss, dysphagia, GERD not responding to PPIs, melena, hematemesis, family hx of upper GI cancers, early satiety
  o Dietary/lifestyle changes effective in GERD: weight loss, elevate head of bed, no eating 3 hours prior to bedtime, avoid things that may relax the lower esophageal sphincter including caffeine, peppermints, tobacco, ETOH.
  o Pain modulators to treat esophageal hypersensitivity

• Gastroduodenal disorders
  o Functional Dyspepsia (FD)
    ▪ Lack of structural disease and one or more of the following: bothersome post-prandial fullness, bothersome early satiation, bothersome epigastric pain, bothersome epigastric fullness
    ▪ FD includes postprandial distress syndrome and epigastric pain syndrome (sxs not necessarily related to food)
    ▪ Pathophysiology of FD is complex/multifactorial
      • CNS modulation, visceral hypersensitivity, GERD, inflammation, decreased fundic accommodation, dysmotility, delayed emptying, overdistended antrum
    ▪ Treatment of FD:
      • Dietary/lifestyle (avoid ETOH, NSAIDS, tobacco, coffee), small meals, reassurance
      • Eradicate HP (Number needed to treat 14)
      • PPIs, H2B (10-15% benefit over placebo)
      • Promotility agents- domperidone, metoclopramide
      • Buspirone (relaxes fundus, 15 mg bid)
      • Anti-depressants
Cannabinoid Hyperemesis Syndrome

- Most highly used illicit drug in the US, each year 2.4 million Americans become new users
- Overlap w/ cyclic vomiting syndrome
- Usually users who have heavy daily use for several years
- 3 phases: prodromal, hyperemetic, recovery
- During hyperemetic phase: persistent and severe nausea/vomiting with mild abdominal pain, multiple ER visits, dehydration
- History of taking very hot showers
- Treatment: stop THC

Narcotic Bowel Syndrome

- Paradoxical development of, or increases in, abdominal pain associated with continuous or increasing doses of opioids
- Can occur in patients with functional diseases or chronic diseases such as cancer, IBD, etc.
- Can also occur post-operatively in patients receiving narcotics for surgery.
- Diagnosed on clinical features
- Most patients using oral equivalent of 75 mg of morphine or more
- Treatment: Opioid detoxification has great success rates in improving abdominal pain

Bowel disorders

- 5 types of bowel disorders that are functional: irritable bowel syndrome (mixed, diarrhea predominant, constipation predominant), functional constipation, functional diarrhea, functional abdominal bloating/distension, unspecified
- It’s important to understand that these disorders exist on a continuum and significant overlap exists. IBS disorders are associated with pain while functional constipation and functional diarrhea are not. Boating and distension are common in all patients with functional bowel disorders.
- Rome 1V diagnostic criteria for IBS:
  - Frequent abdominal pain associated with at least 2 of the following:
    - Related to defecation (better or worse)
    - Associated with a change in frequency of stool
    - Associated with a change in form of stool
- **History**
  - Careful history, must have ABDOMINAL PAIN
  - Usually complain of disordered bowel habits
  - Symptoms often worsened by meals
  - Often have other GI and non-GI symptoms
  - Should take food history (should include questions about sweetened beverages, dairy, wheat, sugar free foods, high fiber foods, gum, coffee, water intake)
  - Psychosocial history including abuse history
  - Lack of alarm signs

- **Workup**
  - Physical exam - must include anorectal exam
  - Labs: CBC, CMP, CRP or fecal calprotectin, celiac testing, thyroid, stool infectious testing (if diarrhea of short duration), endoscopy in some patients

- **Treatment:**
  - Diet: gluten free, dairy free, FODMAP, others
  - Mental health if concomitant hx of abuse, MH disorder
  - Medications: depending on predominant symptom

  **For Diarrhea:**
  - loperamide 2-4 mg prn up to 16 mg/d
  - cholestyramine 9 g bid- tid
  - colestipol 2g qd-bid
  - Rifaximin 550 mg po qd tid x 14 days
  - Alosetron 0.5-1 mg pbid
  - Zofran 4-8 mg po qid
  - Eluxcadoline 100 mg bid

  **For Constipation:**
  - Psyllium-up to 30 g/day
  - PEG 17 g-34 g/day
  - Lupiprostone 8 ug bid
  - Linactotide 290 ug qd

  **For Pain:**
  - Peppermint oil- 250-750 mg, bid-tid
  - Dicyclomine 10-20 mg qid
  - TCAs- despiramine 25-100 mg qhs, amitriptyline 10-50 mg qhs
  - SSRIs
  - SNRIs
  - Lubiprostone 8 ug bid
  - Linaclotide 2909 ug qd
  - Alosetron 0.5-1 mg bid

- **Anorectal Disorders**
  - Fecal incontinence
    - Very common, patients often won’t bring it up
    - Huge impact on quality of life
    - Continence maintained by a variety of factors including anatomical factors, sensation, compliance, neuronal innervation, stool consistency, mobility, psychosocial factors
    - Evaluation: endoscopy, manometry, defecography, MRI in some cases
    - Treatment: difficult. Psyllium, loperamide, lomotil. Pelvic PT, biofeedback therapy, surgery in some cases
  - Functional anorectal pain
Anorectal Pain

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<th>SYNDROME</th>
<th>SYMPTOMS</th>
<th>TREATMENT</th>
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<tr>
<td>LEVATOR ANI</td>
<td>VAGUE, DULL ACHIE HIGH IN RECTUM, WORSE W/ SITTING</td>
<td>- BIOFEEDBACK</td>
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<td>SYNDROME</td>
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<td>- MUSCLE RELAXANTS</td>
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<td>PROCTALGIA</td>
<td>SUDDEN SEVERE PAIN, SHORT LASTING, INFREQUENT</td>
<td>REASSURANCE</td>
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- Functional defecation disorders: paradoxical contraction or inadequate relaxation of the pelvic floor muscles during defecation
  - Hx of straining, manual disimpaction, constipation, incomplete evacuation
  - Treatment: pelvic floor training
- Overlap with pelvic pain
  - Cross-sensitization between GI organs and pelvic floor organs
  - Many patients with IBS have bladder symptoms and vice versa
  - 1/3 of patients with IBS report issues with sexual functioning
  - Variations in GI symptoms depending on what part of menstrual cycle a patient is in
  - Patients with endometriosis have more bowel symptoms compared to patients without
  - Anecdotally- many patients in our pelvic health clinic c/o a variety of GI complaints

References

- Pezzone MA. Chronic pelvic pain and the overlap of chronic pelvic pain disorders. IFPGD 2007