Functional GI Disorders and Their Overlap with Pelvic Pain Syndromes

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Disclaimers

• I have no disclaimers
Objectives

• Describe the various functional gastrointestinal disorders and their basic treatment
• Demonstrate an understand of the evaluation of GI complaints and when to refer to a gastroenterologist
• Understand the biopsychosocial factors underlying GI functional disorders and how these disorders overlap with pelvic pain syndromes
• Ehlers Danlos Syndrome overview

CASE - PR

29 yo F referred for multiple gastrointestinal symptoms

PMH:
- joint hypermobility-recent presumptive dx of Ehlers Danlos Syndrome (3)
- PCOS
- chronic pelvic/bladder pain
- centralized hypersensitivity syndrome
- OCD/anxiety
- dysautonomia
- anxiety/obsessive convulsive disorder
PR continued

- Pertinent Meds
  - Amitriptyline
  - Baclofen
  - Ferrous sulfate
  - Gabapentin
  - Florinef
  - Metformin
  - Omeprazole
  - Midodrine
  - Phenergan
  - Risperdal
  - Miralax
  - Tramadol
  - Fiber

PR

- HPI
  - Dysphagia to solids
  - Severe GERD sx despite PPI
  - Constipation despite fiber/miralax. No bleeding
  - Feeling of bloating/fullness/early satiety
  - No weight loss, +++ weight gain
  - Review of systems is pan-positive

Exam: overweight, walking with a cane, “doughy” appearance, normal vitals, hypermobile, diffuse abdominal pain without focality, beighton hypermobility 9/9

No labs/imaging available
Definition of FGIDs

*RECURRING AND PERSISTENT SYMPTOMS

*OCCUR BECAUSE OF ABNORMAL FUNCTIONING OF THE GI TRACT

*NOT CAUSED BY STRUCTURAL OR BIOCHEMICAL ABNORMALITIES

*DISORDER OF BRAIN/GUT INTERACTION

*TESTING (LABS, IMAGING, ENDOSCOPY) USUALLY DOESN’T GIVE A CAUSE
SCOPE OF THE PROBLEM

- These disorders are COMMON
  - Up to 75% of patients with symptoms don’t seek care

- 10% of general population thought to have IBS
- Minnesota population study: 42% had one or more FGID disorders over a 12 year period

Public Health Impact

- High direct and indirect costs
- Impaired health-related quality of life
- Psychiatric comorbidity
- Extremitesimal comorbidity
- Risk of fecal incontinence

Potential public health impact of FGIDs

- Family disruption
- Impaired workplace performance
- Unnecessary tests
- Unnecessary surgery
- Increased mortality?
ROME IV

Biopsychosocial Conceptual Model

Drossman, Gastro 150 (6), 2016
Esophageal Disorders

- Typical symptoms: heartburn, chest pain, dysphagia, odynophagia
- Absence of:
  - Mechanical obstruction
  - Major motor disorders
  - Documented GERD

WHEN TO REFER: weight loss, dysphagia, GERD not responding to proton pump inhibitors, abnormal imaging, melena, hematemesis

Basic Treatment of Esophageal Disorders

- EGD if alarm symptoms
- Reassurance
- Dietary/lifestyle changes to help reflux symptoms
- If acid-responsive esophagus: Short-term H2B or PPI trial
- Pain modulators to treat esophageal hypersensitivity (TCAs, SSRIs, SNRIs)
Gastroduodenal Disorders

• **Functional Dyspepsia (FD): 10-30% prevalence**
  • Symptom onset at least 6 months before diagnosis and criteria filled for 3 months
  • Have to have lack of structural disease AND one or more of:
    • Bothersome post-prandial fullness
    • Bothersome early satiation
    • Bothersome epigastric pain
    • Bothersome epigastric burning

  *See syllabus for algorithm for evaluation*

Physiological Mechanisms of FD
Treatment of Functional Dyspepsia

• Reassurance, lifestyle, dietary (more frequent/smaller meals, low fat)
• Eradicate H pylori (NNT 14)
• PPIs, H2 Blockers
• Pro-motility agents (domperidone, metoclopramide)
• Buspirone (relaxes the fundus)
• Anti-depressants

Cannabinoid Hyperemesis Syndrome
Cannabinoid Hyperemesis Syndrome

- 1/3 of patients with presumed cyclic vomiting syndrome report marijuana use
- Usually see in patients with daily cannabis use 3-5 times/daily over several years
- Diagnosis usually delayed-multiple ER visits

3 phases

PRODOMAL

HYPEREMETIC

RECOVERY

Galli et al, Curr Drug Abuse Rev, 2011
Cannabinoid Hyperemesis Syndrome

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.
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
Simplified 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
Bristol Stool Scale

- **Type 1**: Separate hard lumps, like nuts (hard to pass)
- **Type 2**: Sausage-shaped but lumpy
- **Type 3**: Like a sausage but with cracks on the surface
- **Type 4**: Like a sausage or snake, smooth and soft
- **Type 5**: Soft blobs with clear-cut edges
- **Type 6**: Fluffy pieces with ragged edges, a mushy stool
- **Type 7**: Watery, no solid pieces, entirely liquid

Evaluation of IBS : 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
- Psychosocial history
- Lack of alarm signs
Evaluation of IBS: Exam/Labs

- Physical exam - must include anorectal exam
- Labs: CBC
  - CRP or fecal calprotectin if diarrhea sxs
  - Celiac testing in IBS-D or IBS- M
  - Consider thyroid testing
  - Stool infectious workup if IBS-D of short duration
  - Endoscopy in some patients

Treatment

- Based on main symptom TYPE and SEVERITY
- May need to have mental health treatment in conjunction
- Dietary/Lifestyle changes
  - Gluten free diet
  - Dairy free diet
  - FODMAP diet
  - Exercise
  - Fluid intake
SYMPTOM | THERAPY
---|---
DIARRHEA | -opioid agonists  
-GFD, low FODMAP  
-bile acid sequestrants  
-probiotics, antibiotics  
-S 5HT3 Antagonists  
-Mixed opioid antagonists/agonists  
-TCAs

CONSTIPATION | -psyllium  
-Stimulant laxatives  
-polyethylene glycol  
-Chloride channel agonists  
-Guanylate Cyclase C agonists

ABDOMINAL PAIN | -antispasmodics  
-peppermint oil  
-TCAS  
-SSRls, SNRls
Anorectal Disorders

- Fecal incontinence
- Functional anorectal pain
- Functional defecation disorders

Fecal Incontinence

- 7-15% in community dwelling women
- 50-70% in nursing homes
- Incidence after vaginal delivery 8%
- Huge impact on quality of life

PATIENTS OFTEN WON’T BRING IT UP!

Evaluation and Treatment of Incontinence

- History
- Endoscopy
- Anorectal manometry
- Anorectal EUS
- Defecography
- MRI of spine if other concerning symptoms/acute
- Treatment: medication, PT, biofeedback, surgery
Anorectal Pain

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<tr>
<th>SYNDROME</th>
<th>SYMPTOMS</th>
<th>TREATMENT</th>
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<td>LEVATOR ANI SYNDROME</td>
<td>VAGUE, DULL ACHE HIGH IN RECTUM, WORSE W/ SITTING</td>
<td>- BIOFEEDBACK</td>
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<td>- MUSCLE RELAXANTS</td>
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<td>PROCTALGIA FUGAX</td>
<td>SUDDEN SEVERE PAIN, SHORT LASTING, INFREQUENT</td>
<td>REASSURANCE</td>
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Functional Defecation Disorder

- Paradoxical contraction or inadequate relaxation of the pelvic floor muscles during defecation
- Often due to failure to relax puborectalis or anal sphincter
- Symptoms
  - Excessive straining
  - Incomplete in evacuation
  - Manual disimpaction

Treatment: PELVIC FLOOR TRAINING
Overlap with Pelvic Pain

• IBS is considered a common cause of pelvic pain

• Cross-talk between:
  • Bowel
  • Lower urinary tract
  • Sexual
  • Gynecologic function

Cross-Sensitization

• Animal models have shown:

  COLON ↔ R

  ↑COLON SENSITIVITY

Pezzone M, IFFGD, 2007
Overlap with Pelvic Pain

- 38-50% of patients with interstitial cystitis have IBS symptoms
- 40-60% of patients with IBS have bladder symptoms
- Women with endometriosis have more bowel symptoms compatible with IBS than women without endometriosis
- Nearly 1/3 of patients with IBS report concerns with sexual functioning
- GI symptoms can vary throughout the menstrual cycle depending on phase

Ehlers Danlos Syndrome

- Group of genetic disorders of connective tissues, results from defects in the synthesis of collagen
- 1/5000 affected by EDS
- 6 subtypes, type 3 (hypermobility subtype) most common
- Present with joint hypermobility, tissue fragility (including blood vessels), skin hyperextensibility
  - Beighton scale- used to assess hypermobility of peripheral joints and spine
    - 9 point scale, a score of at least 5 is used to as hypermobile criteria for EDS
Ehlers Danlos Syndrome

• WIDE variety of symptoms, vary according to which subtype
  • Joint, skin, cardiac, vascular symptoms
  • Autonomic dysfunction including POTS
  • Pelvic floor can be affected
  • GI symptoms
    • Abdominal pain, bloating
    • Delayed gastric emptying
    • IBS, other functional disorders
    • Constipation
    • Esophageal dysmotility
    • Bowel diverticulum
    • GERD, hiatal hernia
    • Nausea, vomiting

Back to our patient

• To review: young woman with type 3 EDS with pelvic pain and a variety of GI complaints including bloating, constipation, severe GERD despite meds
• GI Symptoms likely due in part to EDS, in part to functional, in part meds (amitriptyline, tramadol, metformin)
• Workup: imaging (abdominal US), EGD, esophageal manometry
  • Largely negative except for findings of poor esophageal motility
• Pelvic pain and GI sx are strongly related to EDS
• Importance of looking at the patient as a whole and not compartmentalizing symptoms
Summary

• Overlap between GI and GYN symptoms
• Important to have basic understanding of GI complaints and what to do with them
• Multi-disciplinary care important
  • OUR CLINIC: gynecologists, uro-gynecologist, mental health providers, gastroenterologist, NP who specializes in holistic approach, physical therapists

Questions?

Please see syllabus for references.