Chapter 1: Evaluation and Management of a Tough Case of IBS-D

Mark Pimentel, MD
Director, Gastrointestinal Motility Program and Laboratory
Cedars-Sinai Medical Center
Los Angeles, CA
Please read the case narrative that will be discussed in this chapter.

Case Narrative

• 42-yr-old man experiencing bowel habit changes and abdominal pain for last 24 mos
• Symptoms first began after a dysentery-like illness when deployed to Africa as a marine
• Symptoms are getting worse
• Describes feeling sudden urge to defecate and relates it to specific social situations
Case Narrative (cont’d)

• Mostly has loose, soft stool and an urgency to defecate with some bloating

• Abdominal discomfort often improves with defecation but can return very quickly, along with the urge to defecate again

• Knows it will be a good day when he has a bowel movement in morning and does not have another urge within 15 min
Case Narrative (cont’d)

Medical History
• No family history of organic GI diseases
• Not taking any medication
• Unremarkable physical exam
• Has tried bulking agents, loperamide, diphenoxylate hydrochloride and atropine sulfate, cholestyramine, and several tricyclic antidepressants, all without success
Case Narrative (cont’d)

Colonoscopy and Laboratory Test Results

- Random biopsies from colonoscopy were read as normal mucosa.
- Tests for celiac disease, thyroid dysfunction, anemia, *Clostridium difficile*, and giardiasis as well as other infectious diseases
  - All results were normal or negative.
Rome III Diagnostic Criteria for IBS¹

- Recurrent abdominal pain or discomfort* occurring at least 3 days per month in the last 3 months associated with 2 or more of the following criteria**:
  - Improvement with defecation
  - Onset associated with a change in frequency of stool
  - Onset associated with a change in form (appearance) of stool

**IBS with diarrhea (IBS-D)**²

- Loose or watery bowel movements ≥ 25% of the time with hard or lumpy bowel movements < 25% of the time

*“Discomfort” means an uncomfortable sensation not described as pain
**Criterion fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

Distinguishing IBS-D From Other Gastrointestinal Conditions Causing Diarrhea

• Compared to individuals with non-IBS conditions, individuals with IBS are more likely to experience:
  – Greater variation in the frequency of their bowel movements
  – Greater variation in stool form or consistency
  – An unpredictable or irregular pattern of bowel function

Postinfectious IBS

• Symptoms of IBS begin after an episode of acute infective gastroenteritis
• Prevalence ranges from 4% to 31%

IBS Management

For the American College of Gastroenterology’s report on IBS treatment options, see:

Small Intestinal Bacterial Overgrowth (SIBO)

• Abnormally high numbers of bacteria grow in the small intestine
• May play a role in IBS¹
• Patients with IBS without constipation experienced significant relief of IBS symptoms, bloating, abdominal pain, and loose or watery stools when treated with the antibiotic rifaximin²

Chapter 2: Evaluation and Management of IBS-C versus CC

Lawrence R. Schiller, MD
Attending Physician
Digestive Health Associates of Texas
Dallas, TX
Please read the case narrative that will be discussed in this chapter.

Case Narrative

• 46-yr-old Hispanic woman, complaints of abdominal pain, bloating, and constipation
• Symptoms occurred intermittently for 10 yrs; have worsened over past 2 yrs
• Has crampy lower abdominal pain about 3-5 days/wk; describes pain as severe enough to “double her over”
• Occasionally awakens with abdominal discomfort, but feels more severe pain prior to moving her bowels
• Bloated feeling improves transiently if she passes flatus or a bowel movement
Case Narrative (cont’d)

• Moves bowels 6-7 days/wk
• Describes stools as normal to hard in consistency
• Never feels fully evacuated after a bowel movement; has to strain to pass stool
• Sometimes has to press around her anus to pass stool
• Reports occasional spotting of red blood on toilet tissue after bowel movements
Case Narrative (cont’d)

- Recently gained 5 lb
- No family history of colorectal cancer
- Height 5’4”; BMI 31 kg/m²
Case Narrative (cont’d)

• Tried OTC fiber supplement and increased water intake
  – No improvement in constipation symptoms

• Then tried milk of magnesia for several days
  – Developed soft to loose stools
  – Continued to experience abdominal pain and bloating
Clinical Features of IBS

• Abdominal pain or discomfort that improves with defecation¹
• Change in stool frequency and form/consistency¹
• Experienced symptoms at least 3 days per month for the past 3 months with symptom onset at least 6 months prior to diagnosis¹
• Subtyped according to predominant stool pattern²
  – **IBS with constipation (IBS-C)**
    • Hard or lumpy bowel movements ≥25% of the time with loose or watery bowel movements <25% of the time

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Warning Signs Necessitating Further Diagnostic Evaluation

For additional information on alarm features, see:

Rectal Exam

For additional information on interpreting rectal exams, see:

Management Strategies for IBS-C

For a review of IBS-C management options, see:

Patient Education

Patients with IBS want their healthcare providers to:

• Provide comprehensive information
• Refer them to a source for additional information
• Listen and answer questions
• Provide information about IBS studies and medications
• Provide support and hope

Chapter 3: Evaluation and Management of IBS in a Patient With Comorbidities

Lin Chang, MD
Professor of Medicine
Division of Digestive Diseases
David Geffen School of Medicine at UCLA
Center for Neurobiology of Stress
CURE: Digestive Diseases Research Center
VA Greater Los Angeles Healthcare System
Los Angeles, CA
Please read the case narrative that will be discussed in this chapter.

Case Narrative

• 42-yr-old Caucasian woman, long history of constipation

• Involved in motor vehicle accident 1 yr ago

• After the accident:
  – Constipation worsened
  – Developed neck, shoulder, and lower back pain
  – More trouble sleeping with repeated awakenings
Case Narrative (cont’d)

• Previously, constipation symptoms consisted of bowel movement 3-4 times/wk with hard stools and straining
• Also experienced some abdominal discomfort
• More recently, experienced bilateral lower abdominal pain
• Abdominal pain transiently improves after bowel movement, but later returns
• Feels as if stool is not completely evacuated after defecation
Case Narrative (cont’d)

• Tries to eat foods with more fiber; has used OTC herbal teas, stool softeners, and laxatives
• Constipation symptoms manageable until past yr
• Very bothersome myalgias; experiences only mild relief with NSAIDs
• Past history of depression and anxiety; previously managed with antidepressants and psychotherapy
Case Narrative (cont’d)

• Physical examination:
  – Normal except for mild lower abdominal tenderness
• Digital rectal examination:
  – Small hemorrhoids; no blood in the stool; no evidence of a rectal mass
  – Paradoxical contraction of the pelvic floor when bearing down
• Normal results for routine lab tests and TSH test
• Diagnosed with fibromyalgia by rheumatologist 1 mo ago
• Started on amitriptyline (20 mg at bedtime); helped her sleep but worsened constipation symptoms
Rome Criteria for Constipation

• Have 2* or more* of the following symptoms:
  – For at least 25% of defecations:
    • Straining
    • Lumpy or hard stools
    • Sensation of incomplete evacuation
    • Sensation of anorectal obstruction/blockage
    • Manual maneuvers to facilitate defecation
  – Fewer than 3 defecations per week

**IBS with constipation (IBS-C)**

• Hard or lumpy bowel movements ≥25% of the time with loose or watery bowel movements <25% of the time

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Fiber Supplementation

• A recent study found that psyllium (soluble fiber) provided more symptom relief at 3 months compared to bran (insoluble fiber) and placebo\(^1\)

• A systematic review and meta-analysis also found fiber to be more effective than placebo for IBS\(^2\)

Treatment for IBS and Fibromyalgia

- A systematic review and meta-analysis found that antidepressants were more effective than placebo for the treatment of IBS\(^1\)
- For additional information on the use of TCAs and SSRIs for IBS, see the evidence-based review from the American College of Gastroenterology\(^2\)

Chapter 4: Evaluation and Management of IBS-M in a Menstruating Woman

Satish S.C. Rao, MD, PhD
Professor of Medicine
Director, Neurogastroenterology and GI Motility
University of Iowa Carver College of Medicine
Iowa City, IA
Please read the case narrative that will be discussed in this chapter.

Case Narrative

• 22-yr-old female college student, complaints of intermittent bowel habit changes and abdominal pain occurring for last 12 yrs

• Severity of the abdominal pain symptoms increased around menarche

• Abdominal pain and bloating symptoms increase near and during menses

• Experiences constipation, bloating, and excess gas for ~1 wk prior to menses, followed by abdominal pain and loose and watery stools during first 1-2 days of menses
Case Narrative (cont’d)

- During menses: has moderate to severe abdominal cramping pain and lower back and thigh pain; partially relieved by ibuprofen and heat application
- Tried oral contraceptives; not effective in reducing abdominal pain or alleviating constipation or diarrhea
- Intrauterine device removed 6 mos ago; caused an increase in menstrual cramping pain
- States that mother had “painful menstrual cycles”
Case Narrative (cont’d)

- Pain and bowel pattern symptoms increase during times of stress
- Avoids milk products during premenstrual and menses phases of cycle; not sure this helps
- Takes an OTC laxative when constipated; helps evacuate stool but is associated with gas and abdominal cramps
- Denies unintentional weight loss, blood in her stool, nocturnal diarrhea, and family history of gastrointestinal malignancy
Case Narrative (cont’d)

• Kept an abdominal pain and bowel symptom diary daily for 4 wks
  – Pain symptom levels are higher at menses than at other times of cycle
  – Experiences mild abdominal discomfort on most weekdays
  – Tried increasing dietary fiber intake when experiencing constipation symptoms, but worsened bloating
Diagnostic Criteria for IBS\textsuperscript{1}

• Abdominal pain or discomfort that improves with defecation
• Change in stool frequency and form
• Experienced symptoms at least 3 days per month for the past 3 months with symptom onset at least 6 months prior to diagnosis

Mixed IBS (IBS-M)\textsuperscript{2}

• Loose or watery stools \(\geq 25\%\) of the time AND hard or lumpy stools \(\geq 25\%\) of the time

Gastrointestinal Symptoms Associated With Menses

- Due to menstrual cycle fluctuations, women with and without IBS may experience:
  - Bowel discomfort
  - Abdominal pain/discomfort
  - Bloating
  - Altered bowel patterns
- However, symptoms tend to be more severe in women with IBS

Alarm Features Necessitating Further Diagnostic Evaluation

- Anemia
- Weight loss
- Family history of colorectal cancer
- Family history of inflammatory bowel disease
- Family history of celiac sprue
- Nocturnal pain*
- Rectal bleeding*

*Nocturnal pain and rectal bleeding provide less diagnostic value in differentiating IBS from organic disease.

Note: Per expert opinion, this patient would also benefit from a gynecologic exam and abdominal ultrasound.

Management Strategies for IBS-M

For additional information on IBS management options, see:

Chapter 5: Management of an Obese Patient With Worsening Daytime and Nighttime GERD Symptoms

Stuart J. Spechler, MD
Professor of Medicine
Berta M. and Cecil O. Patterson Chair in Gastroenterology
University of Texas Southwestern Medical Center at Dallas
Chief, Division of Gastroenterology
Dallas VA Medical Center
Dallas, TX
Please read the case narrative that will be discussed in this chapter.

Case Narrative Part 1

• 48-yr-old Caucasian man reports heartburn, 4 to 5 days/wk
• Symptoms mostly occur after meals
• Reports “food comes back up into his mouth” after eating
• Rarely feels as if foods get stuck at level of lower sternum when he eats too quickly and does not chew food well enough
• Symptoms progressively worsening over the past 3-4 yrs
• Rarely feels nauseated after eating. Denies vomiting and anorexia
Case Narrative Part 1 (cont’d)

- Breakfast: 1-2 cups of coffee
- Often eats lunch and dinner at restaurants
- Unable to exercise regularly d/t knee pain
- Gained 20 lb over past 5 yrs
- Drinks 1 glass of red wine with dinner most nights
- History of hypertension; nonsmoker
Case Narrative Part 1 (cont’d)

• Medications
  – Verapamil, 1 baby aspirin per day, OTC ibuprofen 400 mg 3-4 times/wk, OTC antacids, and famotidine daily

• Physical exam
  – Blood pressure 140/85 mm Hg
  – Weight 217 lb; BMI 32 kg/m²
  – Exam otherwise within normal limits
Alarm Symptoms: When to Consider an Upper Endoscopy?

- Dysphagia*
- Weight loss
- Epigastric mass upon examination
- Vomiting, regurgitation
- Evidence of gastrointestinal blood loss

*There is insufficient evidence to recommend for or against using alarm symptoms other than troublesome dysphagia as screening tools for esophageal adenocarcinoma.

Case Narrative Part 2

• Patient undergoes upper endoscopy:
  – Los Angeles grade C erosive esophagitis (moderately severe) involving distal 5 cm of esophagus
  – 3- to 4-cm hiatal hernia
  – Biopsies from the distal esophagus reveal changes consistent with erosive esophagitis; no evidence of Barrett’s esophagus
Therapy Selection

• PPIs are more effective than H2 blockers for:
  – Healing esophagitis
  – Providing symptomatic relief
  – Maintaining healing of esophagitis

• H2 blockers have a more rapid onset of action and may be appropriate for some patients

• No clear recommendations for either step-up or step-down management strategies for GERD

Dosing of PPIs

- Few studies exist in the literature on the use of twice-daily PPIs
- However, expert opinion unanimously recommends twice-daily dosing for patients with GERD with an unsatisfactory response to once-daily PPI therapy
- Optimal timing for twice-daily dosing is 30-60 minutes before breakfast and dinner

Follow-up Endoscopy: When Is It Recommended?

• No direct evidence to support the use of endoscopy to screen for Barrett’s esophagus or esophageal adenocarcinoma in patients with chronic GERD\(^1\)
• However, a follow-up endoscopy may be considered:\(^2\)
  – If symptoms are still present
  – To demonstrate that mucosal healing has occurred
  – To ensure Barrett’s esophagus was not missed in a previous endoscopy in patients with severe inflammation of the esophagus

2. Expert opinion
Case Narrative Part 3

• Patient returns 8 wks later
• Daytime heartburn significantly decreased in frequency and severity
• Now experiences heartburn at night 3-4 times/wk
• Often awakens at night, sometimes with a feeling of choking
Nighttime GERD Management

• Consider adding an H2 blocker at bedtime\textsuperscript{1-4}
  – Studies show gastric pH is increased with this regimen

• Consider lifestyle modifications\textsuperscript{5,6}
  – Eat smaller meals in the evening
  – Avoid eating 2-3 hours before bedtime
  – Elevate the head of the bed 6-8 inches

• Consider a PPI with an immediate-release formulation\textsuperscript{5,7,8}

5. Expert opinion
Chapter 6: Management of a Patient With Multiple Comorbidities and Worsening Extraesophageal GERD Symptoms

Louis Kuritzky, MD
Clinical Assistant Professor
Department of Community Health and Family Medicine
University of Florida
Gainesville, FL
Please read the case narrative that will be discussed in this chapter.

Case Narrative Part 1

- 55-year-old Caucasian woman with dry cough for last 9 mos
- Cough occurs every day; some days are worse than others
- No sputum production or seasonal variation to cough
- Noticed hoarseness for last 4-6 mos
- Experiences typical heartburn symptoms twice/mo, after fatty meals or eating dinner after 9:00 PM
- Managed heartburn with liquid antacid for yrs
- Denies any dysphagia, nausea, or vomiting
Case Narrative Part 1 (cont’d)

Patient History

• 10-lb weight gain over last 2 yrs
• History of depression, hypothyroidism, and coronary artery disease
• STEMI with coronary artery stent placement 4 yrs ago
• Quit smoking 4 yrs ago after 20 pack-yr history
• 1 glass of red wine with dinner per week
Case Narrative Part 1 (cont’d)

Medications
- Clopidogrel, atorvastatin, carvedilol, lisinopril, levothyroxine, paroxetine
- Liquid antacid prn, typically twice/mo

Physical Examination
- Blood pressure 130/70 mm Hg
- Weight 185 lb; BMI 28 kg/m²
- Exam otherwise within normal limits
- Last cardiology evaluation 3 mos ago
Evaluation of Extraesophageal Symptoms

• Explore contributing factors other than GERD
• Endoscopy
• Laryngoscopy
• PPI trial
Therapy Selection for Extraesophageal Symptoms

• If patients have concomitant esophageal GERD syndrome, twice-daily PPIs for 2 months is a practical clinical strategy\(^1\)
• No major differences in efficacy among available PPIs\(^2\)
• May consider adding an H2 blocker at bedtime to twice-daily PPIs\(^3\)
• Need to consider PPI onset of action (optimal timing is 30-60 minutes before a meal)\(^1\)

3. Expert opinion
Lifestyle Modifications

• Recommend weight loss
• Avoid foods that precipitate reflux or heartburn
• Elevate the head of the bed or use a wedge-shaped pillow

Please read the next part of this case.

Case Narrative Part 2

- Started on PPI every morning
- Undergoes upper endoscopy
  - 2-cm hiatal hernia but otherwise normal
- Returns 4 wks later
  - Reports that cough and hoarseness have not improved
  - Cardiologist told her that PPIs and clopidogrel may not be safe to use together
Safety Concerns: PPIs and Clopidogrel

For additional information on this topic, see:


Please read the next part of this case.

Case Narrative Part 3

• Started on PPI bid (morning and noon) and H2 blocker before bedtime

• Undergoes esophageal impedance test and ambulatory esophageal pH monitoring
  – Minimal esophageal reflux and adequate acid suppression

• Saw ENT who performed laryngoscopy
  – Red vocal cords most likely caused by GERD

• Asks about surgery to control her symptoms
Antireflux Surgery

• Observational studies suggest some benefit for carefully selected patients with reflux cough syndrome or reflux asthma syndrome

• Surgery did not reliably improve laryngeal symptoms in patients unresponsive to PPI therapy in one study

• Must consider benefits versus potential symptoms resulting from antireflux surgery

• Further studies are needed in patients with extraesophageal manifestations

Duration of Treatment for Extraesophageal Reflux Syndrome

- At least 40%-50% of patients have persistent symptoms after 8 weeks of empirical PPI therapy
- Expert opinion recommends continued maintenance therapy for symptom control
- Attempt step-down therapy to the lowest PPI dose

Safety Concerns: PPIs and Fracture Risk

• Insufficient evidence to mandate bone density studies or calcium supplementation because of PPI use

• Elderly patients should be screened and treated for osteoporosis regardless of PPI use