Faculty Disclosure

Kimberly S. Harmon, MD

Dr. Harmon has listed no financial interest/arrangement that would be considered a conflict of interest.

Visiting an Old Friend:

Irritable Bowel Syndrome

25th Annual Management of Colon and Rectal Diseases
Irritable Bowel Syndrome

• Most commonly diagnosed GI condition
• Prevalence 16% (45 million) but suspect higher
  • Lack of recognition – 75% do not seek medical attention or are not diagnosed
• 70-80% women
• 25-50% of all referrals to gastroenterologist
• 2nd cause of work absenteeism after common cold
• Increased health costs - 30 billion +$$$$$$$$

Clinical Manifestations

• Abdominal pain
• Gas/Bloating/Abdominal Distension
• Altered bowel habits
  • Diarrhea – 1/3
    • Morning and after meals (exaggerated gastro-colic reflux)
    • Preceded by lower abdominal cramping and urgency
    • Bathroom savvy
  • Constipation – 1/3
    • Hard stools
    • Incomplete evacuation
    • < 3 BMs per week
  • Mixed- 1/3
Diagnostic Criteria

• Rome IV Criteria
  • Recurrent abdominal pain – at least 1 day a week in the last 3 months associated with 2 of the following x 6 months
    • Pain related to defecation
    • Change in frequency of stool
    • Change in form of stool

Diagnostic Criteria

• Manning Criteria (likelihood of IBS proportional number of criteria present)
  • Relief of pain with bowel movements
  • Looser and more frequent stools with onset of pain
  • Passage of mucus
  • Sense of incomplete evacuation
Common Associations

- Dysphagia
- GERD
- Early satiety
- Intermittent dyspepsia
- Nausea
- Non-cardiac chest pain

Extraintestinal Manifestations

- Impaired sexual dysfunction
- Dysmenorrhea
- Dyspareunia
- Increased urinary freq/urgency
- Fibromyalgia
- Migraine headaches
- Interstitial Cystitis
- Pelvic pain
Pathophysiology - Multifactorial

• Gastrointestinal Motility – Constipation/Diarrhea
  • Altered colonic motility
  • No predominant pattern of motor activity has emerged
  • Increased frequency and irregularity of luminal contractions
    - IBS-D
  • Prolonged transit time – IBS-C
  • Exaggerated motor response to cholecystokinin and meal ingestion – IBS-D

• Visceral Hypersensitivity - PAIN
  • Increased sensation in response to stimuli
  • Pain thresholds are lower in the setting of psychological stress
  • Hypersensitization of visceral afferent nerves in the gut
    • Triggered by distention
    • Studies - Increased awareness of balloon distention

Pathophysiology

Abdominal Distension/Gas/Bloating

• Incompletely understood and likely multifactorial
• Endogenous gas production via the fermentation of luminal contents
• Ingestion of short-chain carbohydrates (FODMAP)
• Intestinal bacterial species – alterations of fecal microbiota
• ? Lower cecal pH as a consequence of increased production of short-chain fatty acids
• Motility may affect gas handling and clearance
• Abnormal pelvic floor reflex function – anorectal dyssynergy

➢ Despite above hypothesis - NO difference between gas production or volume of gas in patients with bloating and healthy subjects
Pathophysiology

• Bacterial Overgrowth
  • Association between IBS and SBO conflicting
  • Increased methane production, a gas by product in intestinal bacterial overgrowth – associated with constipation IBS

Pathophysiology

• Food Sensitivity
  • Role of food is unclear
  • Some patients report worsening of symptoms after eating
  • Perceive food intolerance
  • Gluten sensitivity - Some overlap between celiac and IBS
• Food allergies?
• Carbohydrate malabsorption
  • Impaired absorption of carbohydrates
    • Fermentable oligo-, di-, and monosaccharides and polyols (FODMAPs) enter the distal small bowel and colon where they are fermented leading to symptoms and increased intestinal permeability and possible inflammation
    • Fructose intolerance
Pathophysiology
• Psychosocial Dysfunction
  • Psychosocial factors may influence expression of IBS
  • Patients with GI symptoms report more lifetime and daily stressful events
  • Increased anxiety, depression, Type A personalities, phobias and somatization
  • Association of IBS and abuse – physical, sexual, emotional

• Post-infectious
  • History of acute diarrheal illness preceding the onset of IBS
  • Increased risk with bacterial, protozoan, helminth infections and viral illnesses

• Gluten sensitivity

Diagnostic Approach
• No test for IBS
• Exclude other causes
  • CBC, CMP, Thyroid studies, CRP, ESR, Celiac panel
  • Stool studies – if diarrhea
• Imaging studies
  • X-ray vs CT scan - controversial
• Colonoscopy
• Confirm no Alarm symptoms
  • Rectal bleeding
  • Nocturnal or progressive abdominal pain
  • Weight loss
  • Lab abnormalities – anemia, elevated inflammatory markers etc
Treatment

Improving patient’s QUALITY OF LIFE is the mainstay of treatment

Treatment

• Patient Education
  • Establish goals of care
    • Syndrome NOT Disease
    • Validate Symptoms
    • NOT curable but treatable
    • NOT associated with cancer
    • Realistic improvement in symptoms with therapy
      • NOT 100% but 30-50%
      • Maximize GOOD days and Minimize BAD days
    • Eliminate Hidden Agendas (disability claims, missing work, requests of narcotics)

• Physician-Patient Relationship and Patient-Nurse Relationship – “The ART of Medicine”
## Treatment

- **Medication**
  - **Antispasmodics** – relax intestinal smooth muscle
    - Dicyclomine
    - Hyoscyamine
    - Pamine
    - Librax
    - Donnatal- (phenobarbital/hyoscyamine/atropine/scopolamine)
  - **Antidepressants** – TCAs, SSRIs
    - Facilitate endogenous endorphin release, blockade of norepinephrine reuptake leading to enhancement of descending inhibitory pain pathway
    - May slow intestinal transit time

## Treatment - Diarrhea

- **Antidiarrheal agents**
  - Loperamide - scheduled
  - Lomotil
  - Alosetron (Lotronex)
    - 5-hydroxytryptamine (serotonin) 3 receptor antagonists – decrease colonic motility
    - Discuss risks of ischemic colitis
    - Patient must sign consent
  - Eluxadoline (Viberzi)
    - μ and κ opioid receptor agonist and δ-opioid receptor antagonist
Treatment - Constipation

- Osmotic Laxatives - Milk of Mag, MiraLax
- Peristaltic Laxatives - Senna, Bisacodyl etc
- Lubiprostone (Amitiza)
  - Chloride channels to improve colonic transit
- Linaclotide (Linzess)
  - Agonist of guanylate cyclase-C
    - Increases fluid secretion and accelerates intestinal transit by activating the CFTR ion channel
    - Reduction in visceral hypersensitivity via the direct inhibition of colonic nociceptors
  - Watchout for Diarrhea

Treatment - DIET

- FODMAP diet – Fermentable oligo-di-mono-saccharides and polyols
  - Osmotic – pull water into the intestine
  - May not be absorbed
  - May be fermented by intestinal bacteria
- Fructans - wheat, garlic, onions, inulin, artichokes
- Galactans - legumes, cabbage, beans, brussel sprouts
- Lactose – dairy
- Fructose – fruits, honey, high-fructose corn syrup (HFCS)
- Polyols – apples, apricots, avocados, plums, pears, sorbitol, xylitol, mannitol
**Treatment**

- **Physical activity**
  - Potential benefit with regard to symptoms and general wellbeing

- **Fiber – Controversial**
  - Not Benefit
    - Increase in gas and bloating
  - Benefit
    - Enhancement of water holding properties of the stool, formation of gel to provide lubrication, bulking of the stool, binding bile
    - Slowly fermented fibers such as psyllium is better tolerated
    - Non-fermentable Fiber - methylcellulose

**Treatment**

- **Cognitive-Behavioral Therapy (CBT)**
  - Does not mean “all in their head”
    - Physical symptoms of IBS are real, uncomfortable and inconvenient
    - Life stress and distress can worsen symptoms
      - limiting activities (trips and excursions, social get-togethers, food)

- **Psychiatry/Psychology**
  - Particularly if abuse history

- **Physical therapy**
  - Pelvic floor therapy
Treatment

• Antibiotics – Rifaximin
  • SIBO
  • Post infection IBS-D,
• Probiotics
  • Bifidobacterium infantis superior to Lactobacillus
  • Kifer - Lifeway®
• Simethicone and Charcoal
  • Limited efficacy and combination therapy best

Alternative Treatment

• Oil of peppermint – FDGARD and IBGARD
  • Smooth muscle relaxant via calcium channels
  • Improvement of abdominal pain, bloating, stool frequency, borborygmi, flatulence
  • BID – TID or 30 minutes before a meal
  • Best for IBS-D as may worsen constipation
• Kiwifruit Extract
  • Promote both laxation and gastric motility
• STW5 (Iberogast, Florids)
  • Preparation of 20 different herbs
  • More effective than placebo or cisapride on gas/bloating
• Psychosocial therapies
  • Hypnosis
• Acupuncture
Take Home Message.....

The true measure of the skill of a gastroenterologist is how well he or she can treat patients with IBS in their practice. - Richard McCallum MD

Thank you....