IBS
Misty Chaney, APRN-CNP

Objectives
• Understand the physiology of IBS
• Recognize the symptoms and accurately diagnose IBS
• Develop a non-pharmacologic treatment plan for IBS
• Understand a pharmacologic treatment plan for IBS
• Compare the safety and efficacy of current available treatments for IBS

IBS Definition
• Chronic functional bowel disorder characterized by
  • Abdominal pain (90%) and altered bowel habits >3 months (urgency, consistency, frequency, incomplete evacuation)
  • Urgency (50%)
  • Absence of structural or biochemical abnormalities
**IBS types**

- Diarrhea predominant (IBS-D) – 40%
- Constipation predominant (IBS-C) – 35%
- Mixed, alternation diarrhea and constipation (IBS-M) – 23%

**Key facts**

- Most common GI diagnosis among gastroenterology practices in the US
- One of the top 10 reasons for PCP visits
- Affects predominantly females (70%)
- The most common functional bowel disorder
- Can cause intermittent or continuous discomfort for many decades

**Direct medical costs**

- $8 billion annually
- IBS patients incur 74% more direct costs than non-IBS patients
- IBS patients have more healthcare visits for GI and non-GI symptoms
- 13 days/yr work or school absenteeism
IBS vs other disease states

- US prevalence up to 20%
  - Diabetes 3%
  - Asthma 4%
  - Heart disease 8%
  - HTN 11%

History of IBS

- Long dismissed as psychosomatic
- No clear etiology
- Attitudes now changing

Proposed Pathophysiology

- Dysmotility
- Hypersensitivity
- Disordered brain processing
- Enteric nervous system dysfunction
- Post infectious IBS
- Somatization syndrome
- SBIO
- Mast cell dysfunction
- Food intolerance
- Food allergy
- Genetics
Diagnosing IBS

- Symptoms based
- 2-5% of patients will receive a diagnosis of organic disease during long-term follow up
- 32-48 million people in the US with IBS
- 75% undiagnosed
- Increased incidence with first degree relative

**IBS Rome II Criteria**

- 12 weeks of symptoms in the preceding 12 months
- Abdominal pain that has two of three features
  1. Relieved with defecation
  2. Onset associated with a change in frequency of stool
  3. Onset associated with a change in appearance of stool

**Diagnostic tests**

- CBC, CMP, TSH, hemoccult, consider colonoscopy
- IBS chek
  - Detects biomarkers – anti-Cdtb & anti-vinculin antibodies
  - Does not R/O
Differential diagnosis

- IBD
- Malabsorption
- Infection
- Dietary factors
- Psychological
- Celiac disease (5%)
- Thyroid dysfunction
- Meds

Alarm Features

- Symptoms onset after age 50
- Severe or progressively worsening symptoms
- Unexplained weight loss
- Unexplained iron def anemia
- Nighttime symptoms (IBD)
- Fever, chills, recent travel to endemic region
- Family hx colon ca, IBD, celiac
- Rectal bleeding

Pathophysiology

- Alterations in brain-gut interaction
- Psychosocial stressors
- Altered GI motility
- Visceral hypersensitivity
- Increased mucosal permeability
- Immune activation-inflammation
- Alterations in the microbiome
- Previous acute GI infection
**Pathophysiology**

- Defects in the enteric nervous system
- Visceral hypersensitivity
  - Increased visceral afferent response to normal and noxious stimuli
  - Mediators include 5-HT, bradykinin, tachykinins, CGRP, and neurotropins

**Pathophysiology**

- Primary motility disorder of the GI tract
  - Mediated by 5-HT, acetylcholine, ATP, motilin, nitric oxide, somatostatin, substance P, and VIP
  - 5-HT mediates reflexes controlling GI motility and secretion and perception of visceral pain

**Post-infectious IBS**

- 7-32% incidence after acute bacterial gastroenteritis
  - 60% remain symptomatic at 6 yrs follow up
- Psychological distress and severity/duration
  - Campylobacter/Shigella > Salmonella
Post-infectious IBS
- From immune system activation
  - Altered gut transit
  - Increased rectal sensitivity
  - Increased intestinal permeability
  - Increased 5-HT containing enterochromaffin cells in the colon

Current treatment options
- Dietary modification
- Fiber supplements
- Pharmacologic agents
- Psychotherapy

Antidiarrheals
- Symptomatic relief
  - Increase stool firmness
  - Decrease stool frequency
**Antidiarrheals**

- Imodium
  - 2mg QD-BID
  - SEs: dizziness, abdominal pain/bloating, constipation, dry mouth, fatigue
- Lomotil
- Bile acid sequestrants

**Antispasmodics/anticholinergics**

- Smooth muscle relaxants via anticholinergic effects and/or direct action on smooth muscle
  - Dicyclomine HCl
  - Hyoscyamine sulfate
  - Belladonna
  - Librax

**Xifaxin**

- Nonsystemic, rifamycin antibacterial approved by the FDA in 2004
  - Increased systemic exposure in severe hepatic impairment
  - 2015 approval for IBS-D in adults
  - Inhibits protein synthesis and the growth of bacteria
- Xifaxin 550mg TID x 2 wks, taken with or without food
- Reoccurrence of symptoms can be treated up to 2 times
Xifaxin
- Also for travelers diarrhea and hepatic encephalopathy
- SEs: Nausea, elevated ALT (2%)
- C-diff

Alosetron (Lotrenox)
- IBS-D females
- 0.5-1.0 mg QD-BID
- SEs: constipation, ischemic colitis, death
- Prescribing program mandated by FDA
- Requires patient to assign attestation form

Viberzi (Eluxadoline)
- Mu-opoid receptor agonist
- Schedule IV
- 75mg BID w/food
  - Hx chole
  - Mild-moderate hepatic impairment
- 100mg BID w/food
- SEs: constipation, nausea, abdominal pain
**Viberzi Contraindications**

- Biliary duct obstruction or sphincter of Oddi disease
- Alcohol abuse
- Hx of pancreatitis or structural disease
- Severe hepatic impairment
- Hx of chronic/severe constipation

**Enteragam**

- Medical food – serum-derived bovine immunoglobulin/protein isolate
- Bind microbial components, such as toxic substances released by bacteria, and prevents penetrating lining of intestine
- 1 packet BID x2-4wks, QD maintenance
- SEs: nausea, constipation, stomach cramps, headache, increased urination

**Amitiza (Lubiprostone)**

- IBS-C
- 8mcg BID with food
- SEs
  - Nausea (8%)
  - Diarrhea (7%)
  - Abdominal pain (5%)
  - Abdominal distention (3%)
  - Pregnancy Cat C
Psychological options

• Psychotherapy
• Stress management
• Hypnotherapy
• Acupuncture
• Tricyclic antidepressants
• SSRIs

Non-traditional Treatment

• Chinese Herbal medicine
• Peppermint oil
  • Relaxation of GI smooth muscle
  • Studies show significant improvement
• Acupuncture
• Probiotics
  • Anti-inflammatory effect
  • VSL #3 – improved bloating

Diet

• GFD
• FODMAP
Take Home Points

• IBS is a chronic medical condition
• Etiology is unknown
• Treatment is based on relieving symptoms
• True food allergies are uncommon
• Life-style modifications and alternative therapies

References

• Mayo Clinic. Irritable bowel syndrome – tests and diagnosis, accessed August 16, 2016