IRRITABLE BOWEL SYNDROME

Background
1. Definition
   - Chronic non-inflammatory bowel condition with no known structural or biochemical abnormalities
2. General Information
   - Abdominal pain or discomfort that occurs in association with altered bowel habits for at least 3 months
   - Categorized by predominant bowel habit, based on stool frequency and consistency
     - Constipation (IBS-C)
     - Diarrhea (IBS-D)
     - Mixed pattern (IBS-M)
   - Less than one-quarter with symptoms may be diagnosed

Pathophysiology
1. Pathology of Disease
   - Uncertain
   - Possible primary mechanisms of symptom development
     - Motility
     - Visceral hypersensitivity
     - Psychosocial factors
     - Infection/inflammation of enteric mucosa
     - Neurotransmitter imbalance
     - Altered perception of visceral stimuli
2. Incidence, Prevalence
   - Prevalence reported to range from 3% to 22% in Western countries
   - 1.5:1 female to male ratio
   - Consume >50% more health care resources than matched controls
3. Risk Factor
   - Increased risk for other, non-GI functional disorders, including
     - Fibromyalgia
     - Gastroesophageal reflux
     - Migraine
     - Asthma
     - Temporomandibular joint disorder
     - Dysmenorrhea
     - Chronic fatigue syndrome
     - Psychologic disorders
4. Morbidity/Mortality
   - Significant direct and indirect costs of care
   - May have reduced quality of life

Diagnostics
1. History
   - Individual symptoms have limited accuracy for diagnosing IBS, and therefore the disorder should be considered as a symptom complex
A variety of criteria have been developed to identify a combination of symptoms to diagnose IBS\(^1\)

- ACG Task Force criteria incorporated key features of previous diagnostic criteria for a pragmatic definition of IBS\(^1\)
  - Abdominal pain or discomfort
  - Altered bowel function
  - Recurrence of symptoms over an extended period of time at least 3 months
- There is no consistent difference in sensitivity or specificity between Manning, Rome1 and Rome II. Tests of Rome III criteria are needed\(^1\)

- The Manning Criteria\(^1\):
  - Onset of pain linked to more frequent bowel movements
  - Looser stools associated with onset of pain
  - Pain relieved by passage of stool
  - Noticeable abdominal bloating
  - Sensation of incomplete evacuation more than 25% of the time
  - Diarrhea with mucus more than 25% of the time

- Rome I criteria\(^1\)
  - Abdominal pain or discomfort relieved with defecation or associated with a change in stool frequency or consistency, PLUS two or more of the following on at least 25% of the occasions or days for 3 months:
    - Altered stool frequency
    - Altered stool form
    - Altered stool passage
    - Passage of mucus
    - Bloating or distension

- Rome II criteria\(^1\):
  - Abdominal pain or discomfort that has 2 of 3 features for 12 weeks need not be consecutive in the last 1 year:
    - Relieved with defecation
    - Onset associated with a change in frequency of stool
    - Onset associated with a change in form of stool

- Rome III criteria\(^1\):
  - Recurrent abdominal pain or discomfort** at least 3 days/month in the last 3 months associated with \textit{two or more} of the following:
    - Improvement with defecation
    - Onset associated with a change in frequency of stool
    - Onset associated with a change in form (appearance) of stool
  - Criterion fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis
- **“Discomfort” means an uncomfortable sensation not described as pain.
- In pathophysiology research and clinical trials, a pain/discomfort frequency of at least 2 days a week during screening evaluation is recommended for subject eligibility.

2. Physical Examination
   - A general physical examination to rule out signs of systemic disease\(^{11}\)
   - Usually normal
   - May present with sigmoid tenderness

3. Diagnostic Testing
   - Once a positive diagnosis is made using clinical criteria for diagnosis, one should look for alarm warning symptoms * or signs, and should categorize the type of bowel habit\(^{13}\)
   - Limited or no workup for those <50 y/o and no alarm symptoms (SOR:C)\(^{1}\)
   - Workup if patient > 50 y/o or has alarm symptoms, emphasizes colonic imaging (SOR:C)\(^{1}\)
   - Alarm symptoms *
     - Anemia
     - Weight loss
     - Family history of colorectal cancer, inflammatory bowel disease or celiac sprue
   - Routine serologic testing for celiac sprue recommended for diarrhea or mixed type IBS (SOR:B)\(^{1}\)
   - Lactose breath testing should be considered when lactose maldigestion remains a concern despite dietary modification (SOR:B)\(^{1}\)

Differential Diagnoses
1. Inflammatory Bowel Disease
   - Crohn’s disease
   - Ulcerative colitis
2. Medications
   - Laxatives
   - Constipating medications
3. Infections
   - Parasitic
   - Viral
   - Bacterial
   - Opportunistic
4. Malabsorption Syndromes
   - Celiac disease
   - Pancreatic insufficiency
5. Endocrine disorders
   - Hypothyroidism
   - Hyperthyroidism
   - Diabetes mellitus
   - Addison’s disease
6. Endocrine tumors
   - Gastrinoma
   - Carcinoid
7. Colorectal carcinoma  
   - Adenocarcinoma  
   - Villous adenoma  
8. Intestinal pseudo-obstruction  
   - Diabetes mellitus  
   - Scleroderma  
9. Lactose intolerance  
10. Psychiatric disorders  
   - Depression  
   - Anxiety  
   - Somatization disorder  
11. Chronic diarrhea

**Therapeutics**

1. The current treatment approach often requires multiple trials of various medications because of diverse constellation of symptoms which may change over time.  
2. Evidence is weak or moderate and inconsistent for any therapy.  
3. The treatments below have the best evidence of effect.  
   - Bulking agent psyllium may be effective in preventing constipation (SOR:B)\(^1,7\)  
   - Probiotic preparations containing bifidobacteria promote symptom improvement (SOR:B)\(^1,7\)  
     - It has been shown to reduce pain, bloating, and defecatory difficulty, regardless of predominant bowel habit\(^11\)  
   - Lubiprostone therapy promotes global symptom relief in constipation-predominant IBS (SOR:B)\(^1,7\)  
   - Antispasmodic agents may provide short relief of abdominal pain/discomfort of IBS (SOR:C)\(^1,11\) Evidence of long term efficacy, safety and tolerability is limited (SOR:B)\(^1,11\)  
   - Antidiarrheal agent like loperamide is no more effective than placebo at reducing global symptoms of IBS, but is effective for treatment of diarrhea (SOR:C)\(^1,11\)  
   - The dose of laxative and antimotility agent should be titrated according to stool consistency with the aim of achieving soft, well formed stool\(^10\)  
   - Short term course of non absorbable antibiotic like rifaximin is more effective than placebo for global improvement of IBS. No data supporting long term efficacy\(^1,14\)  
   - Selective serotonin reuptake inhibitor (SSRI) therapy promotes global symptom relief and decreased abdominal pain (SOR:B)\(^1,7\)  
   - Tricyclic antidepressant (TCA) therapy promotes global symptom relief and decreased abdominal pain (SOR:B)\(^1,7\)  
   - Psychotherapy is suggested as superior to usual care for global IBS symptom improvement (SOR:B)\(^1,7\)  
   - Cognitive behavioral therapy is suggested as superior to usual care for global IBS symptom improvement (SOR:B)\(^1,7,8\)
Follow-Up

1. In mild cases, there is generally no medical need for follow up consultations in the long term, unless:
   - Symptoms persist, with considerable inconvenience or dysfunction
   - The patient is seriously worried about the condition
   - Diarrhea >2 weeks
   - Constipation persists and does not respond to therapy
   - Warning signs/alarm symptoms* for serious gastrointestinal disease develop
   - Beware of eating disorders developing from dietary manipulation

Prognosis

1. For most patients with IBS symptoms are likely to persist, but not worsen. A smaller proportion will deteriorate, and some will completely recover\(^1\)

2. Factors that may negatively affect prognosis:
   - Avoidance behavior related to IBS symptoms
   - Anxiety about certain medical conditions
   - Impaired function as a result of symptoms
   - Along history of IBS symptoms
   - Chronic ongoing life stress
   - Psychiatric comorbidity

3. Approaches that positively affect treatment outcome:
   - Acknowledging the disease
   - Educating the patient about IBS
   - Reassuring the patient

Patient Education\(^2\)

1. Medline Plus:

2. National Digestive Diseases Information Clearinghouse:
   www.digestive.niddk.nih.gov/ddiseases/pubs/ibs/

3. International Foundation for Functional Gastrointestinal Disorders, Inc.:
   www.AboutIBS.org


References

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