IRRITABLE BOWEL SYNDROME

Background

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

Pathophysiology

1. Pathology of Disease
    - Uncertain
    - Possible primary mechanisms of symptom development[4]
        - 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[3]
    - 1.5:1 female to male ratio[1]
    - Consume >50% more health care resources than matched controls[1]
3. Risk Factor
    - Increased risk for other, non-GI functional disorders, including[5]
        - Fibromyalgia
        - Gastroesophageal reflux
        - Migraine
        - Asthma
        - Temporomandibular joint disorder
        - Dysmennorhea
        - Chronic fatigue syndrome
        - Psychologic disorders
4. Morbidity/Mortality
    - Significant direct and indirect costs of care[1]
    - May have reduced quality of life[6]

Diagnostics

1. History
    - Individual symptoms have limited accuracy for diagnosing IBS, and therefore the disorder should be considered as a symptom complex[1]

- 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[12]
  - 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 *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 *[1]
        - 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[14]
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[11]
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: www.nlm.nih.gov/medlineplus/tutorials/irritablebowelsyndrome/htm/index.htm
2. National Digestive Diseases Information Clearinghouse: www.digestive.niddk.nih.gov/dduseases/pubs/ibs/
3. International Foundation for Functional Gastrointestinal Disorders, Inc.: www.AboutIBS.org
4. WebMD: www.Webmd.com/ibs

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