Irritable Bowel Syndrome

Epidemiology, Pathophysiology, Diagnosis, and Treatment

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KEYWORDS

• Irritable bowel syndrome • IBS • Rome IV

KEY POINTS

- Irritable bowel syndrome is the most common functional gastrointestinal disorder.
- Symptom onset is commonly seen in early adulthood and has a female predominance.
- It has been proposed that the condition is a response to alteration in the complex interaction between the gut and nervous system.
- Diagnosis is based on clinical guidelines as defined by the recently updated Rome IV criteria.
- A variety of effective treatment options exist, including dietary modification, pharmacologic, and behavioral.

INTRODUCTION

Irritable bowel syndrome (IBS) is a common medical condition characterized by chronic, recurrent, abdominal pain and discomfort, and altered bowel habits that occur in the absence of other organic gastrointestinal (GI) disease. The diagnosis is based on the recently updated Rome IV criteria. IBS is characterized as a functional GI disorder (FGD). The underlying cause is still being defined but is thought to be multifactorial. Many treatments have been proposed, depending on the manifestation of symptoms, with variable efficacy. For many patients with IBS, quality of life is impaired and utilization of health care is increased.

The authors have nothing to disclose.

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CONTENT

Epidemiology

Worldwide prevalence of IBS is 10% to 15%.[1] IBS is frequently encountered in primary care and gastroenterology practices. It is the most commonly diagnosed GI disorder. It encompasses 25% to 50% of all referrals to gastroenterologists and is second only to the common cold for the number of days of work missed.[2] IBS often manifests in childhood, though peak prevalence seems to be in early adulthood. Women are affected in a 2:1 ratio to men and up to half of those afflicted seek medical care.[3,4]

Pathophysiology

FGDs are defined as common disorders characterized by persistent and recurring GI symptoms that are not caused by structural or biochemical abnormalities. Of the FGDs, IBS is most common in a group that includes dyspepsia, nausea, vomiting disorders, and proctalgia fugax.

The cause IBS is multifactorial and not completely elucidated. Several recent studies have led to new and novel hypotheses about the pathophysiology of IBS (**Box 1**). These hypotheses have led to the development of various therapeutic options. Often explained as a brain-gut disorder, it is understood that a complex interplay between the GI system and central nervous system leads to symptoms. Observation suggests that psychosocial stressors often precede the expression of symptoms and improvement is seen with therapies directed at the central nervous system.[5]

Inciting factors leading to disruption in GI motor and sensory function may include irritation from products of digestion, prior gastroenteritis, endogenous irritants, alteration in the gut microbiome, mucosal immune activation, food intolerance, and increased mucosal permeability. These underlying disruptions lead to symptoms of discomfort, altered gut motility, and change in bowel habits. Genetic factors may play a role in development of condition.[18]

Diagnosis

To standardize the diagnosis of FGDs, diagnostic criteria have been developed; the most widely used is the Rome criteria. The first iteration of the Rome criteria was proposed in the 1980s and has since been updated 3 times, most recently in 2016 with the Rome IV criteria. The Rome IV criteria updates and simplifies the widely used Rome III criteria and can be applied to a variety of patient populations. A comparison between the 2 criteria sets is explained in **Table 1**.

Diagnosing IBS with the Rome IV criteria necessitates that the patient have symptoms of recurrent abdominal pain on average at least of 1 day per week for the previous 3 months, with symptom onset at least 6 months before presentation. The criteria also necessitate that the patient have abdominal pain in association with at least 2 of the following:

1. Defecation (either improvement or worsening of pain)
2. Change in stool frequency
3. Change in stool form (appearance).[4]

Specific subtypes of IBS often drive treatment and care should be taken to classify patient symptoms into constipation predominant (IBS-C), diarrhea predominant (IBS-D), mixed (IBS-M), or unclassified (IBS-U). IBS-C is defined as having more than 25% of bowel movements classified as Bristol Stool Form Scale (BSFS) 1 or 2, with less than 25% of stools categorized as BSFS 6 or 7. IBS-D is classified as having more than 25% of stools categorized as BSFS 6 or 7, less than 25% as BSFS 1 or 2.