Irritable Bowel Syndrome: A Review and Update

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Abstract

Keywords

- irritable bowel syndrome
- functional gastrointestinal disease

The understanding of irritable bowel syndrome (IBS) has undergone a rapid evolution with scientific advancement. IBS is a common functional bowel disorder that generates a significant health care burden and is the most commonly diagnosed gastrointestinal condition. There are well-established diagnostic criteria and algorithms for the initial evaluation of patients presenting with the symptoms of IBS. The symptoms can be targeted for therapy with a variety of pharmaceutical and non-pharmaceutical agents. Therapy should be individualized for the patient, and the cornerstone for any effective treatment strategy should be the solid patient–physician relationship.

Objectives: Upon completion of this article, the reader will be familiar with the diagnosis of irritable bowel syndrome as well as a multifaceted approach to the treatment of irritable bowel syndrome.

The understanding of irritable bowel syndrome (IBS) has undergone a rapid evolution with scientific advancement, but historically it was recognized over 150 years ago. In 1849, Cumming reported, “The bowels are at one time constipated, another lax, in the same person. How the disease has two such different symptoms I do not profess to explain.”¹ IBS is a common functional bowel disorder that generates a significant health care burden and is the most commonly diagnosed gastrointestinal condition. The percentage of patients seeking health care related to IBS approaches 12% in primary care practices and is by far the largest subgroup seen in gastroenterology clinics.² It has been well documented that these patients exhibit a poorer quality of life and utilize the health care system to a greater degree than patients without this diagnosis.^{3,4} Five large population-based IBS prevalence studies in North America have demonstrated a wide range of prevalence, probably because of the study design and different definitions of IBS.⁵ Most estimates based on these studies place the prevalence rate as between 10% and 15%. The majority of these patients will never seek medical care. Nonetheless, these estimates are staggering: 10% of 312 million would imply that up to 30 million Americans would meet criteria for IBS.

Clinical Manifestations

Diagnostic criteria have evolved since 1979 when Manning et al⁶ first published their criteria. The changes have included the Rome I criteria, which were revised to the Rome II guidelines,⁷ and now to the most recent Rome III criteria to allow for ease of diagnosis. The Rome II criteria state that a patient must have abdominal pain or discomfort for at least 12 weeks, which need not be consecutive, during the past 12 months. This pain or discomfort must have at least two of the following three features: relief with defecation, association with a change in stool frequency, or association with a change in stool consistency. The Rome III diagnostic criteria simply state that a patient must have recurrent abdominal pain or discomfort at least 3 days per month in the last 3 months associated with two or more of the following features: improvement with defecation, onset associated with a change in frequency of stool, or onset associated with a change in consistency of stool. A 2009 position statement issued by the American College of Gastroenterology (ACG) states that no symptom-based criteria have ideal accuracy for diagnosing IBS.⁸ Therefore, the ACG Task Force defines IBS as abdominal pain or discomfort that occurs in association with altered bowel habits over a period of at least 3 months.

Understanding the pathogenesis of IBS is important because today's newer pharmacotherapy agents are beginning

to target the known pathophysiologic mechanisms of IBS. Altered gastrointestinal motility, visceral hypersensitivity, postinfectious reactivity, brain–gut interactions, alteration in fecal microflora, bacterial overgrowth, food sensitivity, carbohydrate malabsorption, and intestinal inflammation all have been implicated in the pathogenesis of IBS. However, the perceived symptoms from these mechanisms consist of abdominal pain or discomfort, bloating, diarrhea, and constipation. Not all symptoms are gastrointestinal, for instance, fatigue is very common. Historically, medical management has focused on symptomatic treatment of these individual complaints. In addition, our current pharmaceutical repertoire is usually limited to treatment for only one symptom. However, newer medications are beginning to focus on the molecular level with serotonin receptor agonists and antagonists.

The role of psychosocial factors in IBS also must be considered because these factors influence treatment options and patients' expectations. According to an American Gastroenterology Association (AGA) technical review,² research into this area has yielded four general observations. First, psychologic stress exacerbates gastrointestinal symptoms magnifying the severity of diarrhea, abdominal discomfort, and so on. Next, psychological and psychiatric comorbidity is often represented among IBS patients. These psychosocial factors influence the illness experience, patient expectations, and treatment outcome of IBS patients. Lastly, the AGA emphasizes that these factors also dictate which patients consult physicians. All these considerations must be kept in mind when considering long-term treatment goals via pharmacotherapy or psychological management.

Diagnostic Approach

Before discussing treatment options with patients suspected of IBS, the physician should carefully perform a detailed history and physical to exclude other diagnoses with symptoms similar to those of IBS. The American College of Gastroenterology Functional GI Disorders Task Force stated that the current data do not support extensive testing in IBS patients.⁸ IBS patients do not appear to have a higher prevalence of organic disease than the general population. If no alarming findings exist such as weight loss, hematochezia, iron deficiency, and symptoms that are typical of IBS, routine diagnostic testing is not recommended. If symptoms are not typical or alarm features are present, testing should include complete blood cell count, comprehensive metabolic profile, an inflammatory marker such as erythrocyte sedimentation rate or C-reactive protein, and thyroid stimulating hormone level. If diarrhea is predominating, fecal leukocytes and stool for *Clostridium difficile* when appropriate (such as patients with antibiotic use within 3 months or recent chemotherapy) should be obtained. Travel and social history may make stool tests for *Giardia* and *Cryptosporidium* antigens appropriate. Serology for celiac disease, preferably the tissue transglutaminase or TTG–IgA, should be performed as part of the work-up for all patients suspected of having IBS associated with diarrhea or mixed subtype. Sanders et al demonstrated that a

higher prevalence of celiac disease exists in IBS patients (4.67%) compared with the general population (< 1%).⁹ However, a recently published study found that 1.7% of IBS patients were positive for TTG, and this was not different from the study group.¹⁰ Nonetheless, testing for celiac disease does seem reasonable in nonconstipating IBS. Colonoscopy is acceptable in patients with a family history of inflammatory bowel disease; colon cancer; alarm symptoms, such as hematochezia, nocturnal or progressive abdominal pain, weight loss, anemia, elevated inflammatory markers, or electrolyte disturbances; or in patients over 50. When a colonoscopy is performed in patients with diarrhea-predominant IBS, random biopsies should be performed to rule out microscopic colitis. These are general suggestions, as each individual patient will present with unique characteristics.

The physician must realize that a strong physician–patient relationship will be the foundation for effective treatment and realistic expectations. Many patients with IBS have bounced around the medical field for many years with varying diagnoses because of the lack of interest or profound frustration by the physician in treating IBS, possible stigma of this disease as being a psychiatric entity, or lack of clinical, physical, or laboratory diagnostic criteria. The medical literature supports gaining the confidence of the patient on the first clinical interview through attentive listening, and detailed explanations of the pathophysiology, natural history, management, and prognosis of IBS.^{11,12} Responding to all the patient's concerns and questions and spending time in the initial visit validates their problem. This reassurance aids in the patient's attempts to understand and accept his or her affliction. Setting appropriate goals and limits gives patients a more structured environment and a sense of purpose and allows them to participate in their own health care strategy. Once a rapport with the patient has been established, long-term goals for this chronic illness are easier to obtain as evident by a decrease in the number of health care visits, reduction in symptoms, and improved patient satisfaction.² The physician should also emphasize the chronic nature of this syndrome because nearly 75% of patients continue to have a diagnosis of IBS 5 years later.¹³

Role of Diet

Patients with IBS commonly complain that specific dietary misadventures contribute to their symptoms of abdominal discomfort, bloating, or exaggerated gastric–colic reflex (urgent bowel movement after eating a meal). The truth is that no specific food is likely the culprit because true food allergies are rare. It is merely the act of eating that most likely initiates these postprandial symptoms. Patients may begin to associate ingestion of certain foods such as fatty foods, caffeine, alcoholic beverages, carbonated foods, or gas-producing foods as the etiology of their complaints.² The physician does not want to restrict the patients' diet excessively because of the risk of encountering nutritional deficiencies. However, it may be a good idea to instruct the patient to limit suspected foods and slowly reintroduce these items individually to see if similar symptoms reoccur. The patient can record their food

encounters and subsequent symptoms with a food diary. Maintaining a daily food diary can empower patients by allowing them to take an active role in their management.

Cash et al demonstrated that lactose intolerance, one of the most common genetic disorders worldwide, was equally prevalent among IBS patients and the general population.¹⁴ Nonetheless, it is prudent that the physician have a high index of suspicion when symptoms of bloating, abdominal distention, and flatulence occur. By giving the patient a short course of a lactose-free diet, one can make a presumptive diagnosis of lactose intolerance if symptoms resolve. One should always query the patient about the intake of foods containing sorbitol (i.e., sugar-free or diabetic candy and gum). Symptoms may be related to impaired absorption of carbohydrates in some patients. Specifically, one can target the fermentable oligo-, di-, and monosaccharides and polyols (FODMAPs). This group includes fructans, galactans, lactose, fructose, sorbitol, xylitol, and mannitol.¹⁵ Studies are limited documenting improvement in patients who restrict their diets of these foods; nonetheless, this is a safe option to consider.

In a study performed by Biesiekierski et al, patients with IBS without celiac disease reached satisfactory symptom control with a gluten-free diet, indicating that gluten was indeed a trigger of gut symptoms.¹⁰ This was a double-blind, randomized, placebo controlled study that only included 34 patients, but there was statistically significant improvement in overall symptoms, abdominal pain, bloating, satisfaction with stool consistency, and fatigue. However, the underlying mechanism of this sensitivity was not identified. Therefore, a trial of a gluten-free diet may be considered even though celiac disease was excluded in the initial work-up.

Pharmacotherapy

In the past, pharmacotherapy management of IBS has consisted of medicines targeting individual symptoms of IBS such as bloating, abdominal pain, diarrhea, and constipation. Newer agents are beginning to treat the suspected underlying pathophysiology of IBS and are statistically significant in improving multiple symptoms. The problem is that no one drug fits all, meaning that the IBS population is very diverse with each individual presenting with different prevailing complaints. The heterogeneity of the IBS population exists because of the wide range of complaints and the varying degree of symptom severity. Tailoring medical care to the individual's concerns and complaints should be the norm. The medical literature regarding IBS therapy is generally inconsistent because of poorly designed studies and ill-defined outcomes.^{16,17} The placebo response in IBS patients is quite significant with short-term trials reporting a 30 to 80% response.¹⁸ One can imagine the conundrum of treating a syndrome that is heterogeneous in its presentation, lacks in significant supporting medical literature, and has a remarkably high placebo response rate. Even though patients' symptoms overlap, addressing them individually allows the physician to simplify and organize the appropriate medical therapy.

Abdominal Pain

Visceral hypersensitivity is felt to be a major contributing factor in abdominal pain experienced by IBS patients. Managing abdominal pain in IBS has changed very little over the past few decades: antispasmodics remain a cornerstone of therapy. Antispasmodic agents can work by anticholinergic properties like dicyclomine and hyoscyamine. The evidence of the effectiveness of these agents is not compelling, as even the meta-analyses for smooth muscle relaxants are conflicting. One meta-analysis demonstrated an advantage over placebo for antispasmodics in terms of abdominal pain and distention.¹⁹ Brandt et al examined 18 randomized controlled trials, of which only three included dicyclomine and hyoscyamine,⁸ but concluded the trials were of suboptimal quality based on study design with inadequate duration of treatment. With only one of those previously mentioned three studies demonstrating a statistically significant improvement in global IBS symptoms and abdominal pain²⁰ and more frequent anticholinergic side effects versus placebo (69% vs 16%), it is easy to understand why insufficient data exist about antispasmodics. Even though the antispasmodic medications have not demonstrated an overwhelming statistically significant advantage,¹⁶ it is common practice in the United States to utilize these agents. The anticholinergic effects, including constipation, dry mouth, visual disturbances, and urinary retention, can lead to discontinuation of these medications. These medications can be given as an oral formulation or a sublingual tablet, and be dosed on an as-needed or regular basis. Many patients benefit by taking the medication before meals. If known exacerbating factors such as a particular diet or stress are anticipated, these medications can be given as a prophylactic measure. It has also been noted that medicines such as dicyclomine can lose effectiveness with chronic use; therefore, it may be best employed on an as-needed basis.² Given the potential side effect of constipation, these medications should be used cautiously in IBS with constipation predominating.⁸

When addressing abdominal pain in the IBS patient, it is helpful to distinguish whether the pain is constant/chronic versus intermittent with known exacerbating factors. The latter has better results when treated with the antispasmodics, whereas the former may have a better response from low-dose tricyclic antidepressants (TCAs) or serotonin reuptake inhibitors (SSRIs). Antidepressants in IBS patients can facilitate endogenous endorphin release, blockade of norepinephrine leading to enhancement of descending inhibitory pain pathways, and blockade of the pain neuromodulator, serotonin.^{21,22} TCAs, via their anticholinergic properties, also slow intestinal transit time, which may provide benefit in diarrhea-predominant IBS.²³ The goal is to reduce the visceral hypersensitivity allowing for better management of the chronic pain. Reducing abdominal pain allows for decreased anxiety and a distraction from these patients' IBS complaints.⁸ A 2009 meta-analysis concluded that antidepressants were significantly more effective than placebo for the relief of pain and global symptoms. The treatment effects were similar for SSRIs and TCAs.²⁴

Some patients will hesitate to use antidepressants because of the associated stigma of these medications; therefore, the management of chronic pain should be emphasized. Counseling the patient regarding the potential side effects of constipation and sedation is essential, and caution should be used when prescribing these medications in constipation-predominant IBS.⁸ Treatment with TCAs generally starts with a very low dose given before bedtime and even with gradual increases never reaches the same doses that are used to treat depression. Often only 25 to 50 mg of amitriptyline can be utilized with success, although one can start with a very low dose of 10 mg daily. Currently, the evidence for using selective serotonin reuptake inhibitors (SSRIs) is limited and inconsistent. These agents may be more beneficial in treating patients with concomitant anxiety and constipation-predominant IBS; generally, there are fewer side effects.

Bloating

This IBS symptom is unfortunately a very subjective complaint among patients and remains extremely difficult to treat. The majority of medications designed for this indication have not been helpful. Simethicone and activated charcoal theoretically should aid in alleviating bloating, but have not demonstrated a true clinical or even statistical benefit. The role of prokinetic agents has yet to be defined and further well-designed studies are needed.¹⁸ Because even IBS treatments such as dietary fiber supplementation can actually worsen bloating secondary to colonic metabolism of non-digestible fiber, care must be taken in prescribing fiber in patients with a significant bloating problem.^{18,25} Nonabsorbable sugars like lactulose potentially used for constipation-predominant patients can exacerbate gaseous distention. The physician should instruct the patient to be mindful of gaseous food (i.e., beans, carbonated beverages, etc.) and attempt to elicit any aerophagia symptoms.

Constipation

Dietary and lifestyle modifications should be the initial management tools when treating mild to moderate symptoms of constipation-predominant IBS. Patients should increase their consumption of fiber-enriched foods, and the physician needs to encourage fluid intake to prevent stool dehydration. Teaching the patient to schedule times for bowel evacuations with the aid of stimulating substances such as coffee or prunes allows for a regimental routine, thus eliminating previously unrecognizable bad habits. Bulking agents (corn fiber, bran, psyllium, polycarbophil, ispaghula husk, and methylcellulose) are a simple and inexpensive next-treatment option. In theory, adding a hydrophilic substance increases luminal water, which adds bulk to the stool and allows easier stool passage. One meta-analysis of 13 trials using bulking agents, concluded that evidence was lacking to firmly demonstrate an advantage with only polycarbophil and ispaghula husk in three trials exhibiting improvement in constipation.¹⁶ Not surprisingly, no benefit was seen with abdominal pain or bloating. Furthermore, a systematic review summarized that all 13 trials were flawed in methodology and fiber was merely no more effective than placebo.⁵ A

randomized placebo controlled trial compared the effectiveness of increasing dietary content of soluble fiber (psyllium) or insoluble fiber (bran) in patients with IBS. It was concluded that those patients taking psyllium had a significant improvement in relief of symptoms and overall reduction in severity of symptoms. However, bran showed no clinical benefit and actually caused worsening of symptoms in many cases.²⁶ Given that these agents possess a relatively safe profile, it is reasonable to prescribe a trial as initial management for constipation with the understanding that these agents can worsen bloating and abdominal discomfort. Currently, there are no randomized controlled trials examining laxatives in IBS patients.⁸ However, polyethylene glycol can be considered for refractory cases as it was shown to improve stool frequency but not abdominal pain.¹⁸

Lubiprostone is a locally acting chloride channel activator that enhances chloride-rich intestinal fluid secretion. It was initially approved for use in chronic idiopathic constipation, but later received approval for use in women with constipation-predominant IBS. Two placebo-controlled trials as well as an open-label study showed significant overall response to the medication.²⁷ The approved dose for IBS is 8 µg twice daily, and 24 µg dosing can be used for constipation. There seem to be no short-term safety issues and the main side effect is nausea. However, long-term safety remains to be established. Further studies will need to be performed to determine its role in treatment of male IBS patients. Currently, it is best reserved for women with IBS and severe constipation that has been refractory to other treatments.

Diarrhea

When considering treatment for diarrhea-predominant IBS, the physician should attempt to elicit any particular stressors that can initiate the patient's exaggerated gastrocolic reflex. The anecdotal event could include eating, walking, traveling with the fear of not being near a restroom, or stressful encounters in a social setting or even at work. As previously mentioned, keeping a diary of not only foods but also events or situations that correlate with the onset of diarrhea can help the patient in recognizing these stressors and allow the physician to better coordinate therapy. Once these predictable episodes of diarrhea are known, the physician can begin to utilize conservative, first-line treatment with antidiarrhea agents. Of the two most commonly used antidiarrhea agents, loperamide and diphenoxylate HCl-atropine, loperamide is the only one to have been studied for diarrhea-predominant IBS. These medications increase gastrointestinal transit time by interacting with the GI musculature, thus allowing for more water absorption.¹⁸ Of the few randomized controlled trials, the data indicated a decrease in diarrhea without any effect on global IBS symptoms or abdominal pain.⁵ The physician should instruct the patient to discontinue these medications once the diarrhea has subsided to prevent constipation. Because of this side effect, the physician should have a higher threshold in prescribing these agents in IBS patients with alternating diarrhea and constipation.⁸

Although opioid medications can decrease diarrhea, they should be used with extreme caution because of the

possibility of severe constipation and obviously for the addiction potential. As a result, most physicians avoid using these agents. Cholestyramine may have a role in the treatment of diarrhea-predominant IBS, but further evidence is needed to better elucidate the role of bile acid malabsorption and its treatment in IBS.¹⁸ Cholestyramines' side effect of constipation should be remembered. As mentioned above, patients with multiple IBS symptoms that include abdominal pain and diarrhea may benefit from the low dose TCAs, which can decrease the frequency of bowel movements and treat the visceral hypersensitivity.

Alosetron is a 5-hydroxytryptamine (serotonin) 3-receptor antagonist, that modulates visceral afferent activity from the gastrointestinal tract.²⁸ A meta-analysis that included multiple randomized controlled trials demonstrated its efficacy in relieving global IBS symptoms. These trials demonstrated effectiveness versus placebo for improvement of abdominal discomfort, stool frequency, consistency, and urgency.^{2,5} It has been found to be most effective in women with diarrhea-predominant IBS. Constipation was reported in approximately one third of patients using alosetron.^{2,5} Severe constipation and ischemic colitis were rarely reported as well as some potential drug-related fatalities.^{5,18} After being withdrawn from the market, it was reapproved by the U.S. Food & Drug Administration with restrictive guidelines,² and is currently available under a specific prescribing protocol, with a starting dose of 1 mg daily.

Miscellaneous Treatment Strategies

Numerous different treatments have been attempted in IBS patients. One interesting approach is the utilization of antibiotics after assessment for small intestine bacterial overgrowth. By using lactulose hydrogen breath testing on 202 IBS patients, Pimentel et al found that 157 or 75% had abnormal test results signifying bacterial overgrowth.²⁹ All patients with diagnosed bacterial overgrowth received open-label antibiotics. Unfortunately, only 47 patients returned for a subsequent breath test to document eradication of the small intestine bacterial overgrowth. However, the study did reflect that patients with successful eradication had statistically significant improvement in abdominal pain and diarrhea. Pimentel et al subsequently published a double-blinded randomized controlled trial substantiating that the normalization of the lactulose breath test with antibiotics in IBS patients led to a significant reduction of IBS symptoms.³⁰ In the TARGET 1 and TARGET 2 trials, patients with IBS and without constipation were randomly assigned to receive either rifaximin 550 mg three times a day or a placebo for 2 weeks. In this study, there was no breath test prior to entry. Those patients that received rifaximin were more likely to report relief of global IBS symptoms than those that received a placebo.³¹ These were large studies enrolling over 1200 patients with greater than 70% completing the study which followed the patients for 12 weeks after treatment. Like most IBS studies, there is predictable response in the placebo group. Currently, there are insufficient data to recommend breath testing for small intestinal bacterial overgrowth in all IBS patients as the optimal test is unclear. It is also not clear

why antibiotics are effective—are they treating small bowel bacterial overgrowth or altering the colonic flora? The benefit from treatment appears to be transient. Therefore, the routine use of antibiotics in all IBS patients is not recommended. However, it is reasonable to try a 2-week trial of rifaximin in those patients with IBS without constipation and with moderate to severe symptoms, especially bloating, who have failed other therapies. In the prior studies, there were no significant side effects of rifaximin compared with placebo, but currently its cost can be a prohibitive factor.

Alternative Therapies for Irritable Bowel Syndrome

Many IBS patients turn to herbal preparations because of a widespread perception that they are safe and effective for a variety of ailments. Although many patients utilize herbal and alternative approaches, they usually do not volunteer this information on the physician interview, so it is important to specifically ask about these agents in a nonjudgmental fashion. An excellent review by Spanier et al examined these alternative therapies.³² Though unstudied in IBS, aloe has been frequently used in treating constipation-predominant IBS. Peppermint oil, which has antispasmodic properties by relaxing smooth muscle, demonstrated efficacy in terms of abdominal discomfort and pain and abdominal distention in IBS patients in three randomized trials when compared with placebo.^{33–35} The American College of Gastroenterology Task Force on IBS determined that antispasmodics, such as peppermint oil, may provide short-term relief, but evidence for long-term efficacy is not available and evidence for safety and tolerability is limited.⁸

Perhaps the most common strategy employed by patients is to alter the native flora of the colon with “probiotics” such as the commercially available preparations of the *Lactobacillus* species.^{16,32} Patients have often tried these preparations even before seeking medical care due to widespread marketing techniques and availability. Trials to date remain conflicting and no clear benefit has yet to be established for lactobacilli. However, *Bifidobacteria*, *Saccharomyces boulardii* and other combinations of probiotics demonstrate some efficacy. The probiotic strain *Bifidobacterium infantis* 35624 (one capsule per day) has been shown to reduce pain, bloating, and defecatory difficulty and to normalize stool habit in IBS patients, regardless of predominant bowel habit. The probiotic strain *Bifidobacterium lactis* DN-173 010 has been shown to accelerate gastrointestinal transit and to increase stool frequency among IBS patients with constipation.³⁶ However, a systematic review of randomized clinical trials evaluating the efficacy, safety, and tolerability of probiotics in IBS determined that only *Bifidobacterium infantis* 35624 showed significant improvement in global and specific IBS symptoms in appropriately designed studies. The theory behind the mechanism for improvement appeared to be downregulation of a proinflammatory state. No other probiotic showed significant improvement in IBS symptoms in an appropriately designed study.³⁷ The best clinical evidence for probiotic efficacy is in protection against infection, especially

in neonatal and elderly groups. The role of probiotics in IBS remains uncertain given the limited clinical studies.³⁸

The role of psychological therapies has been analyzed in multiple studies.^{5,32} The methodological design of most of these studies was inadequate; therefore, unequivocal evidence is lacking. However, the ACG Task Force concluded that cognitive therapy, dynamic psychotherapy, and hypnotherapy are more effective than usual care in relieving global symptoms of IBS.⁸ Along the lines of alternative therapy, many patients will seek methods considered nontraditional in Western medicine. This is not surprising given the frustration of the symptoms. Individual patients may obtain relief from acupuncture, meditation, and relaxation techniques. There has been a recent study showing the effectiveness of mindfulness-based stress reduction in a small number of patients.³⁸

Treatment of Nongastrointestinal Symptoms

Discussion so far has centered on the treatment of the various gastrointestinal symptoms of IBS. However, this patient population has a wide variety of other symptoms. A study by Gralnek et al of the health-related quality of life (HRQOL) of IBS showed significant other symptomatology.³⁹ Surprisingly, patients with IBS had lower scores on the SF 36,⁴⁰ a QOL scale, than comparative groups of diabetics. This was specifically noted in areas such as bodily pain, emotional well-being, fatigue, and poor social functioning. It is recommended that clinicians perform routine screening for diminished HRQOL in their IBS patients.⁵ Bringing a treatment strategy into play that addresses these other mental and physical symptoms is difficult; again, the relationship and rapport between the physician and patient is very important.

The treatment of IBS must be a multifaceted approach and not limited to pharmacotherapy. It is pivotal to establish a cohesive and respectful relationship with the patient. Trust and validation are of singular importance and essential for the patient to accept the reality of their often chronic affliction. It is important to establish realistic goals and expectations, with the patient understanding there is no "cure" for IBS, but rather use of tools to help with symptom control and overall QOL measurements. Patient-friendly information is available through the ACG and UpToDate (www.uptodate.com), which can help educate the patient and possibly augment the therapeutic response. Pharmacotherapy directed at individual symptoms has been the standard of care up to now. However, the use of newer modalities to address multiple IBS symptoms will be an integral part of the treatment algorithm, especially as more scientific validation occurs.

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