ADVANCES IN IBS

Current Developments in the Treatment of Irritable Bowel Syndrome

Section Editor: William D. Chey, MD

The Emerging Role of Brain-Gut Therapies for Irritable Bowel Syndrome



Megan E. Riehl, PsyD Clinical Assistant Professor of Medicine Division of Gastroenterology University of Michigan Health System Ann Arbor, Michigan

G&H What is behavioral therapy, and why would it be helpful for patients with irritable bowel syndrome?

MR Behavioral therapy, when applied in a gastroenterology setting, encompasses brain-gut therapies that target interactions occurring between the brain and the intestines. It is now known that the brain-gut axis serves as the communication pathway in which the brain and intestines continually send chemical and nerve signals that can significantly impact how an individual feels. Especially for patients with irritable bowel syndrome (IBS), brain-gut therapies are emerging as a beneficial method of addressing the bidirectional pathway between the brain and the gut. Importantly, brain-gut therapies work on 2 specific pathways, with one pathway targeting visceral hypersensitivity and the other targeting gastrointestinal motility and abdominal pain. Patients can work with a gastrointestinal psychologist to understand what visceral hypersensitivity is and how it can drive symptoms, and to develop skill sets that help them feel more effective at coping, self-regulating, and being resilient. Behavioral therapy is short term and can impact the quality of life of patients in significant ways. Research shows that brain-gut therapies reduce health care utilization and symptom burden for patients, specifically when these therapies are integrated into gastrointestinal practices, such as academic medical institutions.

G&H Which brain-gut treatment modalities are the most beneficial for patients with IBS?

MR Cognitive behavioral therapy (CBT) and gutdirected hypnosis are the primary behavioral interventions that are introduced to patients with gastrointestinal conditions. CBT is well validated for use in medical settings, and has been tailored to gastrointestinal-specific concerns. This form of therapy can provide patients with important information pertaining to psychoeducation regarding IBS in general, the brain-gut axis, the role of physiologic stress, the stress response in the body, and the rationale for brain-gut therapies. Patients undergoing CBT are taught various modifications of arousal or relaxation strategies, including diaphragmatic breathing, muscle relaxations, and mindfulness techniques. Relaxation activates the parasympathetic nervous system, which helps with the downregulation of pain thresholds and normalizes gut motility. Patients learn strategies that they can implement both in times of physiologic discomfort as well as for general relaxation and symptom management. Cognitive restructuring addresses the concept that certain ways of thinking can impact how the body responds and how the patient feels. With a collaborative and interactive approach, patients learn how to generate a more accurate cognitive response when they experience stress or gastrointestinal symptoms. For example, patients with IBS may experience pain and

predict that it will lead to a negative outcome, such as a bowel accident. Patients can work with a gastrointestinal psychologist to identify that negative thinking will not help their functioning, and to instead shift to a more realistic and rational type of thinking. Cognitive restructuring can also be used to address symptom-specific anxiety or hypervigilance.

Gut-directed hypnosis is also a well-validated braingut therapy for patients with IBS, and is recommended by the American Gastroenterological Association as a treatment option for patients with moderate to severe IBS. This intervention can be applied to patients who have failed other medical treatments. Gut-directed hypnosis was introduced in clinical settings in the mid-1980s, after Dr Peter Whorwell introduced the first evidence-based practice of hypnosis for patients with IBS. Dr Olafur S. Palsson tailored the intervention to a 7-session protocol called the North Carolina protocol; it is one of the treatment modalities that I use most frequently in my practice with patients with refractory IBS. Similar to CBT, gutdirected hypnosis provides patients with another tool for coping with abdominal and bowel discomfort through targeted and tailored suggestions while the body is in a relaxed state. Studies have shown that hypnotherapy helps to reduce abdominal pain, bloating, and bowel dysfunction, and improves quality of life. There is robust evidence-based literature supporting the long-term efficacy of this therapy; once patients learn it, the effects of the hypnosis in improving symptoms are lasting.

G&H How does Internet-based treatment compare to in-clinic therapy?

MR The application of gut-directed hypnosis via the Internet has demonstrated comparable responses to those of in-clinic treatment, although data on the differences between these 2 approaches are mostly anecdotal. For patients with IBS who may be symptomatic, the ability to perform brain-gut therapies (especially gut-directed hypnosis) from the comfort of their own home can certainly be beneficial. Research evaluating short-term Internet-based CBT is emerging. The preliminary results look favorable, but more research is needed in this area.

G&H Who is the ideal candidate for brain-gut therapy?

MR The ideal candidate is one who has insight into the role of stress on IBS symptoms and is motivated to be engaged in brain-gut therapies. Patients who have failed or experienced a lack of response to other treatments can also undergo brain-gut therapy. However, patients with suicidality or a severe untreated psychiatric comorbidity

are not ideal, as these comorbidities could interfere with the patients' ability to respond to or engage in brain-gut therapies.

G&H Can gastroenterologists perform brain-gut therapies themselves, or do they need to work with psychologists?

MR The primary roles of the gastroenterologist, when it comes to the integration of psychogastroenterology, are to make the appropriate diagnosis, introduce the importance of brain-gut therapies, and promote the integration of psychological care. Patients can then work with a gastrointestinal psychologist who has specialized training in gastrointestinal disorders to apply brain-gut therapies. Additionally, gastrointestinal psychologists can aid patients in addressing the substantial burden of IBS. It is important to note that working with a gastrointestinal psychologist is different from working with a general mental health provider, as the former understands the nuances of gastrointestinal complexities.

G&H When should patients be referred for psychological treatment?

MR Best practices in treating IBS support the idea that patients should be referred for behavioral therapy early, not just when patients have failed everything else. Ideally, consultation with a gastrointestinal psychologist would be incorporated very early into the treatment plan so that collaboration can occur between the patient, psychologist, gastroenterologist, and possibly a dietitian. IBS is a multifactorial disorder, and the field of gastroenterology is moving toward additional in-clinic assessments of mood to more comprehensively aid patients in the management of complexities associated with IBS.

G&H What training is necessary for psychologists to meet the needs of patients with IBS?

MR Gastrointestinal psychologists are licensed providers who have a doctoral degree and a subspecialization in clinical heath psychology, with further specialization in gastroenterology. Health psychologists are encouraged to further their expertise with a subspecialty within the gastrointestinal field in order to gain a strong understanding of the complexities of IBS from both a physiologic and a psychological perspective. Psychogastroenterology, as the practice is now referred to by the Rome Foundation, is still a very new field; it would be beneficial to establish core competencies and specific types of training credentials.

G&H What are the potential barriers to behavioral therapy for patients with IBS?

MR One of the main barriers to behavioral therapy is access to care with a gastrointestinal psychologist. In areas that do have gastrointestinal psychologists, long waits can be common, as many patients are interested in this treatment option. Although insurance coverage can be quite good, there are still some limitations in terms of providers being out of network. Many gastrointestinal psychologists use health and behavior codes, and, sometimes, reimbursement is less than ideal; however, it is improving.

G&H What is the role of telemedicine?

MR Telemedicine services are being used, but not widely; they are mainly location-dependent. I believe that there is a growing demand for telemedicine to reach a broader range of patients, which also speaks to the need for Internet-based therapy. The majority of gastrointestinal psychologists tend to be housed within academic institutions, so telemedicine would be an excellent way to disseminate these services to patients who do not live near these areas. A challenge with the implementation of telemedicine is reimbursement, the quality of which varies by state. In my clinical experience, the use of telemedicine should be personalized, and a combination of in-clinic and home-based sessions can be very beneficial.

G&H What are the priorities of research?

MR It is important to foster a more widespread integration of behavioral therapy in the gastrointestinal setting. More research is needed to assess the comparative effectiveness of brain-gut therapies as well as how they compare against the use of psychotropic medication. As I mentioned previously, we need to establish more core competencies and specific training in psychogastroenterology so that we can make quality care more available and accessible.

Dr Riehl has no relevant conflicts of interest to disclose.

Suggested Reading

Bonnert M, Olén O, Bjureberg J, et al. The role of avoidance behavior in the treatment of adolescents with irritable bowel syndrome: a mediation analysis. *Behav Res Ther.* 2018;105:27-35.

Keefer L, Palsson OS, Pandolfino JE. Best practice update: incorporating psychogastroenterology into management of digestive disorders. *Gastroenterology*. 2018;154(5):1249-1257.

Kinsinger SW. Cognitive-behavioral therapy for patients with irritable bowel syndrome: current insights. *Psychol Res Behav Manag.* 2017;10:231-237.

Lackner JM, Jaccard J, Keefer L, et al. Improvement in gastrointestinal symptoms after cognitive behavior therapy for refractory irritable bowel syndrome [published online April 25, 2018]. *Gastroenterology*. doi:10.1053/j.gastro.2018.03.063.

Radziwon CD, Lackner JM. Cognitive behavioral therapy for IBS: how useful, how often, and how does it work? *Curr Gastroenterol Rep.* 2017;19(10):49.

Riehl ME, Chey WD, Stidham RW. Comparison of quality of life and treatment response in IBS and IBD patients undergoing GI-focused behavioral health interventions. *Gastroenterology*. 2016;150(4)(suppl 1):S443.

Sebastián Sanchez B, Gil Roales-Nieto J, Ferreira NB, Gil Luciano B, Sebastián Domingo JJ. New psychological therapies for irritable bowel syndrome: mindfulness, acceptance and commitment therapy (ACT). *Rev Esp Enferm Dig.* 2017;109(9):648-657.

Thakur ER, Shapiro J, Chan J, et al. A systematic review of the effectiveness of psychological treatments for IBS in gastroenterology settings: promising but in need of further study [published online May 10, 2018]. *Dig Dis Sci.* doi:10.1007/s10620-018-5095-3.