ADVANCES IN IBS

Current Developments in the Treatment of Irritable Bowel Syndrome

Section Editor: William D. Chey, MD

Nonmedical Therapies for Chronic Constipation

Shanti Eswaran, MD
Associate Professor
Division of Gastroenterology
University of Michigan Health System
Ann Arbor, Michigan

G&H How is chronic constipation diagnosed?

SE Decreased stool frequency is typically considered characteristic of constipation, but the term constipation is more generally used to describe difficulty with defecation. Some patients describe chronic constipation as straining, difficulty with evacuation, or a blockage in the anorectal area. Even if patients have stools once or several times daily, they may still report constipation. Thus, constipation is not just decreased stool frequency; it can be a change in stool consistency and/or an inability to completely evacuate the bowel.

The Rome IV criteria can be used to diagnose 3 types of constipation: functional constipation, irritable bowel syndrome (IBS) with constipation, and defecatory disorders. Chronic constipation is a symptom-based disorder, meaning that diagnosis is based on a patient's symptoms, not necessarily by laboratory tests, imaging, or endoscopy. There can be overlap among the different types of constipation, and in real-world practice, it is more useful to conceptualize these types as indices that can exist along a dynamic spectrum. Thus, a patient may have more functional constipation symptoms at one point, but may shift into IBS with constipation and back again to functional constipation over a period of time. These different types of constipation are diagnosed via history, although anorectal testing and manometry may be helpful to categorize a patient.

G&H How has chronic constipation traditionally been treated?

SE Generally, first-line chronic constipation therapies are guided by cost and availability. Thus, chronic constipation is typically treated first with dietary changes and lifestyle modification. This means counseling patients about dietary fiber, adequate water intake, and regular exercise. The next steps include supplementary fiber or commercially available fiber preparations, stool softeners, stimulant laxatives, and over-the-counter osmotic laxatives. If these treatments are not helpful or are not tolerated, intestinal secretagogues (ie, medications that increase water secretion into the gut) and/or prokinetic agents may be indicated. Many patients obtain symptom relief with these agents, which are safe for long-term use. However, over-the-counter agents generally offer little to treat the abdominal pain or discomfort associated with constipation, whereas prescription laxatives may offer incremental benefit for both bowel and abdominal complaints. Of course, prescription medications may carry a substantial cost to the patient and may also be associated with adverse events such as cramping, bloating, and diarrhea.

G&H Why are alternatives, particularly nonmedical alternatives, needed for the treatment of chronic constipation?

SE In general, the available medical treatments for chronic constipation offer a therapeutic gain of approximately 7% to 15% over placebo, which is not that impressive. To me, this makes it clear that there is an unmet need for other effective treatments. In addition, patients are increasingly becoming concerned regarding the long-term safety of medications in general, with demand growing for more natural solutions for chronic medical conditions, including chronic constipation. As previously mentioned, prescription laxatives may offer significant benefit; however, they have a high cost, and they have possible risks such as diarrhea, bloating, and cramping. Up to 15% of the US population experiences constipation in some form. Thus, I think it is very appealing to treat this common disease with a more natural approach.

> Although psyllium fiber and prunes were more effective than kiwifruit in terms of alleviating symptoms related to constipation, patients were not able to tolerate them nearly as well as kiwifruit.

G&H Which nonmedical therapies are currently available for patients with chronic constipation?

SE Practitioners often overlook the importance of lifestyle modification, including regular exercise, adequate fluid intake, quality sleep, and the avoidance of dietary triggers, for the treatment of gastrointestinal functional symptoms. Fiber and fiber preparations (which can be classified as nonmedical therapies) comprise a time-honored but not always straightforward approach to the treatment of chronic constipation. Fiber types are complex, and may be consumed in both dietary and supplementary forms. The consumption of certain foods may improve constipation. Prunes, or dried plums, comprise another time-honored approach, along with green kiwifruit, as both have been shown in several studies to have measurable laxative effects. Depending on the strain, probiotics are also marketed to help treat chronic constipation.

G&H What advantages and disadvantages are associated with the use of nonmedical therapies to treat chronic constipation?

SE Typically, nonmedical approaches are associated with low risk and low cost, making them good first-line treatment options for patients who are interested. Adverse events such as cramping and bloating are fairly common with prescription-based laxatives, which may encourage patients to at least first consider more natural products, which have favorable safety profiles consisting of only short, limited adverse reactions, if any. The obvious disadvantage to nonmedical treatment is nonresponse, which may be seen more frequently in patients with slow transit constipation or defecatory dysfunction.

G&H Which adverse events are associated with nonmedical approaches to chronic constipation?

SE With many fibers, such as psyllium-based fibers or wheat bran fibers, as well as with prunes, many patients report cramping and bloating in addition to occasional diarrhea. Just like any laxative, when starting these treatments, it is recommended to start with low doses and to escalate them slowly. The palatability of supplementary fiber is also off-putting to many patients.

G&H Have any studies evaluated the use of nonmedical therapies for chronic constipation?

SE There have been few head-to-head trials comparing pharmaceutical and nonpharmaceutical approaches to chronic constipation, but there have been a number of recent studies specifically comparing nonmedical therapies.

Prunes in general help with constipation because they contain both a natural fiber as well as sorbitol, which is a naturally occurring sugar alcohol that causes a laxative effect by increasing stool water and volume. Fiber works fairly similarly in the gut by undergoing fermentation in the small bowel and colon to produce short-chain fatty acids and gas, therefore affecting gastrointestinal function and motility. A 2011 study by Attaluri and colleagues compared psyllium fiber with prunes, concluding that both remedies were fairly effective for the treatment of chronic constipation, with prunes being slightly more effective. However, both of these treatments may exacerbate abdominal symptoms such as pain, discomfort, or bloating.

My colleagues and I recently conducted a study comparing prunes, psyllium fiber, and kiwifruit in 78 patients with chronic constipation. Although psyllium fiber and prunes were more effective than kiwifruit in terms of alleviating symptoms related to constipation, patients were not able to tolerate them nearly as well as kiwifruit. There was significantly more satisfaction overall with kiwifruit compared with prunes and psyllium fiber over a 4-week period. In addition, kiwifruit was effective in over 40% of patients. These findings were presented at last year's virtual meeting of the American College of Gastroenterology and were recently published online ahead of print publication in the *American Journal of Gastroenterology*.

G&H Can nonmedical therapies be used in conjunction with medical therapies?

SE From a clinical and pragmatic standpoint, there should be little or no contraindication to the use of both types of therapies. To my knowledge, there are few, if any, studies that have addressed this issue specifically in terms of using these therapies concomitantly or sequentially. However, it is important to avoid overdoing the laxative effects of any of these modalities, so starting with low doses and slowly adding therapies in a stepwise fashion is always helpful.

G&H What should providers keep in mind when managing patients interested in nonmedical therapies?

SE Providers need to be cognizant that patients are increasingly seeking evidence-based natural treatments for their medical conditions and that many patients believe that natural products are safer and better. If providers are not able to offer patients solid information with confidence, patients will obtain that information from other sources that are much less likely to be scientific or evidence-based.

G&H What are the priorities of research in this field?

SE For many years, patients and providers have focused on the negative relationship between food and gastrointestinal symptoms. Over the past 20 years, there has been interest in the identification of trigger foods, and how a certain food may result in symptom generation. It is important to remember that food is meant for nourishment, to be shared, and sometimes to be savored. The next step is exploring the relationship between food and symptoms as a positive tool in terms of treating symptoms and diseases, rather than demonizing the negative effects associated with consumption.

Disclosures

Dr Eswaran has received research funding from Zespri International.

Suggested Reading

American Gastroenterological Association, Bharucha AE, Dorn SD, Lembo A, Pressman A. American Gastroenterological Association medical position statement on constipation. *Gastroenterology*. 2013;144(1):211-217.

Attaluri A, Donahoe R, Valestin J, Brown K, Rao SS. Randomised clinical trial: dried plums (prunes) vs. psyllium for constipation. *Aliment Pharmacol Ther*. 2011;33(7):822-828.

Chey SW, Chey WD, Jackson K, Eswaran SL. Exploratory comparative effectiveness trial of green kiwifruit, psyllium, or prunes in US patients with chronic constipation [published online February 5, 2021]. *Am J Gastroenterol*. doi:10.14309/ajg.0000000000001149.

Eswaran S, Muir J, Chey WD. Fiber and functional gastrointestinal disorders. *Am J Gastroenterol*. 2013;108(5):718-727.

Lacy BE. Update on the management of chronic idiopathic constipation. *Am J Manag Care*. 2019;25(4 suppl):S55-S62.

Sharma A, Rao S. Constipation: pathophysiology and current therapeutic approaches. *Handb Exp Pharmacol*. 2017;239:59-74.

Wang X, Yin J. Complementary and alternative therapies for chronic constipation. *Evid Based Complement Alternat Med*. 2015;2015:396396.