CHALLENGES IN DIAGNOSING CHRONIC CONSTIPATION AND CONSTIPATION-PREDOMINANT IBS*  

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ABSTRACT

The diagnosis of chronic constipation and constipation-predominant irritable bowel syndrome (IBS-C) is challenging because of the considerable degree of symptom overlap, the difficulty in eliciting important information about bowel habits during the history, and the limitations of various diagnostic tests used to evaluate constipation. This article explores these challenges and reviews the elements of the diagnostic process, including the history, the physical examination, the diagnostic criteria for constipation, IBS-C, and dyssynergic defecation, and the motility studies used to differentiate slow-transit constipation from dyssynergic defecation. It also includes 2 case studies to illustrate the overall diagnostic process. The first case study is presented in segments that coincide with the main elements of the evaluation; the second case study is presented at the close as a diagnostic summary for clinicians.


The diagnosis of chronic constipation and constipation-predominant irritable bowel syndrome (IBS-C) is challenging for several reasons. Signs and symptoms of both conditions overlap, not only with each other but also with other syndromes, such as dyspepsia and dyssynergia. Eliciting useful historical information, particularly about the patient’s defecation response and need for digital manipulation, can be difficult because many patients are reluctant to discuss it. Furthermore, some diagnostic tests that are clinically useful in certain circumstances are not as useful in others.

The key to diagnosis is an appropriate workup, which includes a comprehensive patient history, evaluation of the presenting symptoms and whether they meet standard diagnostic criteria, a review of the stool diary if one is available, a thorough physical examination, and laboratory tests, motility studies, and other diagnostic procedures as needed. In many cases, the diagnosis is suggested by the history or the physical examination findings. However, in many other cases, further testing is needed to establish the diagnosis.

This article reviews the elements of the diagnostic workup and the data supporting their use and assessing their clinical utility. It incorporates 2 case studies to illustrate the overall diagnostic process. The first case study is presented in segments to coincide with the main elements of the diagnostic evaluation and includes some interactive discussion with the roundtable symposium faculty. The second case study is presented as a consecutive series of findings and queries at the end of the article to serve as a diagnostic review for clinicians.

HISTORY AND PRESENTING SYMPTOMS

In addition to the standard medical, family, and social histories, the history of any patient who presents...
with a complaint of constipation should address the specific symptoms and their onset, the patient’s usual diet, medications taken for any condition, the defecation response, the need for digital manipulation, a past history of surgery and/or obstetric or back injury, and stool frequency, consistency, and size.\(^1,2\) Eliciting information about manual maneuvers to either disimpact stool or facilitate defecation can be obtained by reassuring patients that many people with constipation use these maneuvers, and then asking them what they do to help the passage of stool. The 7-category Bristol Stool Scale, which correlates with colonic transit time (ie, types 1 and 2 are associated with slower transit, and types 6 and 7 with more rapid transit),\(^2,4\) can be used to assess stool form, size, and consistency, and should be incorporated into the stool diary.

As illustrated in the first segment of Case Study 1 later in this section, most of the components of the history have been addressed and a provisional diagnosis is possible.

**Symptoms and Diagnostic Criteria**

One of the challenges in diagnosing constipation and IBS-C is that patients and physicians perceive symptoms differently. In a survey of 418 patients in primary care and 57 specialists and medical residents, 50% of patients used different criteria to define constipation than physicians.\(^5\) Whereas 27% of the patients defined defecation every 2 days or less frequently as constipation, none of the physicians did. Similarly, 25% of patients considered hard stools alone as a criterion of constipation, but only 6% of the physicians did. Conversely, physicians were more likely to define constipation as defecation every 4 days or less frequently (46% vs 13% of patients) and hard stools plus altered frequency (21% vs 10% of patients). The only criterion of agreement was defecation every 3 days or less frequently (27% of physicians vs 25% of patients). These disparities suggest that physicians diagnose and treat constipation according to their definitions, not those of their patients, and that a substantial number of patients with constipation are misdiagnosed and therefore not treated.

A similar disparity exists between self-reported symptoms of constipation and the Rome II diagnostic criteria for constipation.\(^6\) In a study comparing 312 patients who self-reported symptoms and 171 patients meeting the Rome II diagnostic criteria, those who self-reported symptoms were twice as likely to report straining, hard or lumpy stools, a sensation that stool could not be passed, and a feeling of incomplete evacuation.\(^7\) The percentage of patients reporting less than 3 bowel movements per week and a need to press

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**Case Study 1**

**Presentation and History**

- 40-year-old male pilot with a 2-year history of constipation
- He reports hard stools and straining, but no blood in the stool; has less than 2 bowel movements per week
- He periodically takes time off from work because of his symptoms
- He is frustrated because his symptoms interfere with his job and his social life
- Family history: negative for inflammatory bowel disease and colon cancer
- Social history: smokes one-half pack per day, exercises occasionally, and has 3 soft drinks per day
- Dietary history: increased fiber intake made abdominal bloating worse
- Medication history: antispasmodic agents (made bloating worse), senna laxatives, docusate, and occasional enema (no relief)

History is consistent with a diagnosis of:
1. IBS-C
2. Chronic constipation
3. Dyssynergic defecation
4. Psychogenic disorder
5. Dietary fiber deficiency

**Discussion**

Dr Rao: Based on the presentation and history, what is your diagnosis? (Four panelists selected chronic constipation.)

Dr Bharucha: I too agree with the diagnosis of chronic constipation. In people who have a varying work-shift schedule, I wonder if bowel symptoms may be partly attributable to lifestyle.

Dr Rao: That’s appropriate. It falls under the larger category of lifestyle-induced constipation.
around the anus to facilitate a bowel movement was roughly equal in both groups.

The Rome II criteria for chronic constipation specify that 2 of the following 6 symptoms—less than 3 bowel movements per week, hard or lumpy stools, straining, sensation of incomplete evacuation, sense of anorectal obstruction, and the use of manual maneuvers, such as digital disimpaction—must be present with at least 25% of defecations for more than 3 months and that the criteria for IBS are not fulfilled.6

The Rome II criteria for IBS specify that abdominal pain or discomfort with 2 of the following 3 features—relieved by defecation and/or onset associated with changes in stool frequency and/or onset associated with changes in stool form—must be present for at least 12 weeks, which need not be consecutive, in the preceding 12 months.6 The American College of Gastroenterology has proposed a simpler definition of IBS: abdominal discomfort associated with altered bowel habits.8

The Manning criteria for IBS were derived from a questionnaire to identify symptoms that could differentiate between IBS and organic dysfunction and thus assist in the clinical diagnosis of IBS.9 Symptoms that were significantly associated with IBS versus organic dysfunction were easing of pain after a bowel movement, looser stools at pain onset, more frequent bowel movements at pain onset, and abdominal distention.

Although the symptoms noted in these sets of diagnostic criteria are of some use in differentiating chronic constipation from IBS-C in clinical practice (eg, manual maneuvers and a feeling of obstruction are more common in chronic constipation, whereas bloating and abdominal pain tend to be more common in IBS-C), the considerable degree of overlap makes a definitive diagnosis difficult.6,10

**DYSSYNERGIA**

There is also some degree of symptom overlap with dyssynergia, which is defined more by physiologic abnormalities of the pelvic floor muscles than by clinical symptoms alone. As defined by the Rome II diagnostic criteria, patients with dyssynergic defecation must meet the Rome II symptomatic criteria for functional constipation and also exhibit all of the following during attempted defecation: manometric, electromyographic, or radiologic evidence of inappropriate contraction or failure to relax the pelvic floor muscles, evidence of adequate propulsive force, and evidence of incomplete evacuation.11 Although these criteria are useful, they need to be revised to include impaired propulsion.

In a recent survey of 118 patients with dyssynergia, 80% reported an urge to defecate, 75% reported straining, 60% to 70% reported incomplete evacuation, and 40% reported the need to use digital maneuvers.12 Whether these and other symptoms alone will predict which patients with difficult defecation have dyssynergia depends, in part, on how 3 manometric subtypes of dyssynergia compare with the normal manometric pattern.13 All 3 subtypes are important in the pathogenesis of symptoms in these patients.

As shown in Figure 1, the normal pattern is characterized by a rise in intrarectal pressure (adequate push) and a synchronized relaxation of the anal canal, type 1 dyssynergia by adequate push and paradoxical contraction of the anal canal, type 2 by inadequate push and paradoxical contraction, and type 3 by adequate push but an inability to relax the pelvic floor muscles.13 When 32 patients with type 1, 24 with type 2, and 14 with type 3 dysynergia were compared to 30 patients with a normal manometric pattern, the only symptom that predicted dyssynergia was the need to use manual maneuvers to facilitate a bowel movement.13

The fact that 46% of the patients (those with types 1 and 3) fulfilled the Rome II manometric criteria for dyssynergia brings into question whether type 2 is a
manometric artifact or a true component of dyssynergia. Three other measures of anorectal function—colonic transit studies, the balloon expulsion test, and defecography—were thus done to resolve this issue. Although 60% to 70% of the patients had prolonged colonic transit regardless of manometric subtype, there was little difference between type 1 and type 2 in the prevalence of abnormalities on balloon expulsion testing. However, 50% of patients with type 2 had abnormalities on defecography, compared to 20% for type 1 and 30% for type 3, suggesting that type 2 dyssynergia is not a manometric artifact but a real phenomenon.

In terms of clinical utility, colonic transit studies or balloon expulsion testing identified as many patients with each of the 3 manometric subtypes of dyssynergia as colonic transit studies or balloon expulsion testing or defecography, suggesting that defecography does not add much to the diagnostic yield in patients with chronic constipation or dyssynergia. However, in selected cases, it may provide additional diagnostic information. In summary, symptomatic criteria (ie, constipation) plus abnormal findings on manometry plus abnormal balloon expulsion or abnormal colonic transit best identifies patients with dyssynergia.

**Physical Examination**

The physical examination comprises the abdominal examination to detect the presence of stool and rule out a gastrointestinal (GI) mass; inspection of the anorectal region to identify skin excoriations, skin tags, anal fissures, and hemorrhoids; evaluation of the anocutaneous reflex, particularly in patients who report fecal incontinence; and the digital rectal examination to detect rectal strictures and identify paradoxical contraction or impaired perineal descent when the patient is asked to bear down. As illustrated in the second segment of Case Study 1 later in this section, an abdominal and rectal examination were done and a provisional diagnosis is again possible.

**Blood Tests**

The physical examination is the appropriate time to order laboratory tests to exclude metabolic disorders such as thyroid disease, diabetes, and hypercalcemia if they are suspected. These tests include a complete blood count, blood chemistry profile, serum calcium and glucose levels, and thyroid function tests. However, there are no studies that either support or refute the routine use of these tests in the evaluation of patients with constipation.

**Further Evaluation**

If a diagnosis cannot be definitively established from the history and physical examination, and blood test results have ruled out a metabolic disorder as the cause of constipation, further testing is necessary. The challenge is choosing the diagnostic test or combina-

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**CASE STUDY 1**

**Physical Examination**

- Abdominal examination: normal except for left lower quadrant fullness, with probable stool
- Rectal examination: no tenderness, stool is felt, guaiac negative, paradoxical contraction of anal muscle during attempted defecation, no fissure

What is the most likely diagnosis?

1. IBS-C
2. Chronic constipation
3. Dyssynergic defecation
4. Psychogenic disorder
5. Dietary fiber deficiency

**Discussion**

Dr Rao: Given the physical examination findings, what is your diagnosis? (Three panelists selected chronic constipation and 1 selected dyssynergic defecation.)

Dr Chang: I thought that paradoxical anal muscle contraction on rectal examination was not that good because you haven’t done a balloon expulsion test yet.

Dr Rao: That’s an important point because the rectal examination is done with the patient lying in the left lateral position. Asking him to attempt defecation in that position is unnatural and unphysiologic. Identifying paradoxical contraction in this position is not a diagnostic finding per se, but it should raise the index of suspicion that something is abnormal and that dyssynergia is a possibility. Absence of paradoxical contraction helps significantly in excluding dyssynergia as a cause of constipation.
tion of tests that is most appropriate for the individual patient, as illustrated in the third segment of Case Study 1 later in this section.

**COLONIC TRANSIT STUDY**

The indications for measuring colonic transit are to identify and objectively document patients with slow physiologic colonic transit, to assess the severity of constipation and colonic inertia, and to assess the patient’s response to therapy.\(^{15,16}\)

Several methods are used for assessing colonic transit. One simple method that is preferred by many involves the administration of a single Sitzmark capsule, which has 24 radiopaque markers, on day 1 and taking a plain X-ray of the abdomen 120 hours later (ie, day 6).\(^2\) Multiple-capsule techniques can also be used, but the single-capsule method is sufficient for routine clinical purposes. Normal transit is indicated by the presence of 5 or less markers.

A review of 6 studies evaluating the diagnostic utility of measuring colonic transit found that the yield of abnormal findings ranged from 38% to 71% and reflected great variability in methodology.\(^14\)

**ANORECTAL MANOMETRY**

Anorectal manometry is used to detect abnormalities during attempted defecation and to evaluate the muscular contraction and relaxation in the rectum and anal sphincter region, anorectal reflexes, rectal compliance, and rectal sensation.\(^2,17\) However, there are considerable differences in methodology from center to center that may affect test performance and test interpretation.

A review of 6 studies evaluating the diagnostic utility of anorectal manometry found that the yield with regard to dyssynergia ranged from 30% to 75%.\(^14\)

**BALLOON EXPULSION TEST**

The balloon expulsion test is a simple bedside test to assess a patient’s ability to defecate. A balloon is inserted into the rectum and filled with 50 mL water, at which time a stopwatch is started. Unless there is significant pelvic floor dysfunction, most patients can expel the balloon in 1 minute. Expulsion times longer than 1 minute suggest dyssynergia.\(^19\)

A review of 5 studies that evaluated the diagnostic utility of the balloon expulsion test found that expulsion was abnormal in 23% to 63% of patients with constipation.\(^19\) The variability reflected differences in methodology.

**COLONIC MANOMETRY**

Ambulatory colonic manometry is a research tool that is slowly moving into the clinical arena as an adjunct to current methods of assessing colonic function in selected patients with severe constipation.\(^2,14\) It identifies several pathophysiologic abnormalities associated with constipation, including the reduced number, amplitude, and duration of high-amplitude propagated

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**CASE STUDY 1**

**NEXT STEPS**

1. Empirical treatment with laxatives/prokinetics
2. Order colonic transit study
3. Order colonoscopy
4. Order anorectal manometry
5. Order balloon expulsion test

**DISCUSSION**

**Dr Rao:** What would you do next?

**Dr Leung:** I would treat empirically, but also ask the patient to refrain from straining at bowel movements. If that fails, I would perform anorectal manometry.

**Dr Chang:** I would treat empirically.

**Dr Bharucha:** I would do a colonoscopy and look for a structural lesion.

**Dr Hasler:** I would try giving him fiber first, but I would have a lower threshold for ordering a colonoscopy if he didn’t respond.

**Dr Lembo:** I would do a colonoscopy.

**Dr Lee:** He’s tried several laxatives and didn’t respond. I would try polyethylene glycol 3350 (Glycolax; Schwarz Pharma, Inc., Mequon, Wis; GoLYTELY and MiraLax; Braintree Laboratories, Braintree, Mass), which he hasn’t taken yet.

**Dr Lembo:** It’s not one of the choices, but why not consider biofeedback? If it fails, then we can always order the other tests.

**Dr Rao:** Before considering biofeedback, you will need anorectal manometry to identify dyssynergia. However, you raise an important point; biofeedback is only one component of a much broader behavioral program that addresses the physiologic problem and a host of lifestyle issues.
contractions (HAPCs) in patients with slow-transit constipation. Patients typically have 0 to 2 HAPCs/24 hours compared to up to 6/24 hours for controls.19

As shown in Figure 2, the normal diurnal pattern of colonic motor activity seen in 20 healthy individuals (ie, a sharp rise after a meal and a steep decrease during sleep) is markedly blunted in 19 patients with refractory slow-transit constipation without pelvic floor dysfunction.19 Most of the patients had a sluggish response or no response to the first meal, a diminished response upon awakening, and poor response to a second meal.

Patients were classified into 1 of 3 manometric subtypes: neuropathic, myopathic, or normal. The neuropathic subtype was defined as the absence or impairment of 2 of the following 3: HAPCs, the gastrocolonic response, or the waking response. The myopathic subtype was defined as the presence of HAPCs and gastrocolonic and waking responses, but at values that were below the normal range seen in healthy individuals. Normal was defined as having a normal colonic motility pattern.19 All of these patients received standard therapy for 3 months. None of the patients with neuropathic dysfunction improved, but 4 of 5 patients with myopathic dysfunction and 3 of 4 patients with a normal pattern improved.

Colectomy was recommended for all patients with neuropathic dysfunction. Seven underwent the procedure and reported 80% to 90% satisfaction with their bowel function on a visual analogue scale 1 year later.19 The remaining 3 patients opted for medical therapy and reported only 20% to 30% satisfaction with their bowel function at 1 year. Those patients with myopathic dysfunction continued with medical therapy and reported 40% to 60% satisfaction at 1 year, whereas normal patients also continued with medical therapy and reported 50% to 70% satisfaction at 1 year.

**DEFECOGRAPHY**

Defecography is used to assess anatomic and functional changes in the anorectum and can also be used to verify or assess pelvic outlet obstruction.3,16 It is a good adjunct to clinical and manometric tests. It is typically done by placing 150 mL of barium paste in the rectum and asking the patient to squeeze, cough, or bear down. Structural and functional changes are monitored by fluoroscopy while the patient attempts to evacuate the barium. Defecography can detect a number of abnormalities, but it has limited clinical utility as a stand-alone diagnostic test.

Conclusions from a systematic review regarding the clinical utility of the diagnostic tests described earlier in this article are shown in the Table.14

<table>
<thead>
<tr>
<th>Table. Clinical Utility of Diagnostic Tests to Evaluate Constipation</th>
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<tr>
<td>• Barium enema is not helpful</td>
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<td>• Colonoscopy is indicated for surveillance and alarm symptoms with constipation (eg, blood in the stool), but not helpful in routine evaluation of constipation</td>
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<tr>
<td>• Colorectal function tests lack uniform methodology</td>
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<td>• Anorectal manometry, colonic transit studies, and balloon expulsion testing are useful and complementary</td>
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<tr>
<td>• Defecography is not helpful</td>
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<tr>
<td>• Colonic manometry may be useful in identifying patients who are likely to benefit from colectomy</td>
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Data from Rao et al.19
CASE STUDY 1

FOLLOW-UP
• Patient was treated with tegaserod (Zelnorm; Novartis Pharmaceuticals, East Hanover, NJ) 6 mg twice daily
• Symptoms resolved over 4 weeks, but recurred after 3 months
• Patient was referred to a gastroenterologist
• Gastroenterology evaluation
  • Sitzmark study revealed mildly delayed colonic transit time
  • Anorectal manometry revealed dyssynergic defecation
  • Colonoscopy findings were normal

CASE FOLLOW-UP

The results of empirical therapy and various tests are outlined in the final segment of Case Study 1.

CONCLUSIONS

The evaluation of constipation begins with a comprehensive history that addresses constipation-specific symptoms and a careful physical examination. If alarm symptoms such as blood in the stool or weight loss are present, the patient should be evaluated appropriately. If alarm symptoms are not present and the predominant symptoms are abdominal pain and bloating, this would favor a diagnosis of IBS-C. If absent, it would favor a diagnosis of chronic constipation. In either case, the patient should be evaluated and treated appropriately. If there is no improvement after treatment has been initiated, a colonoscopy, barium enema, and/or referral to a specialist should be considered.

With regard to evaluation of motility, it is important to note that physiologic tests are complementary and there is no single diagnostic test. Together, anorectal manometry, balloon expulsion test, colonic transit study, and, in selected cases, defecography will detect significant colonic and pelvic floor dysfunction. A normal finding should exclude significant colonic or pelvic floor dysfunction, and suggests that the constipation symptoms may be caused by psychosocial and/or other issues. Abnormal colonic transit and normal anorectal manometry and balloon expulsion tests indicate slow-

CASE STUDY 2

PRESENTATION AND HISTORY
• 38-year-old nurse with nausea, epigastric pain, postprandial fullness, constipation, and lower left quadrant pain with defecation
• Symptoms began 3 years earlier, after an episode of severe diarrhea 24 hours after a picnic
• Epigastric pain begins 30 minutes after eating and is associated with nausea and bloating, but no vomiting; bowel movement and tramadol occasionally relieve the pain
• She has 6 bowel movements a day, with small, hard stools (Bristol type 1–2), straining, and mucus, and feels a constant need to evacuate
• Her weight fluctuates by 10 pounds, and she uses enteral supplements
• Docusate sodium, senna laxatives, proton pump inhibitors, metoclopramide, and phenothiazines have provided no relief
• She has missed 15 days of work in the past year

What is the likely diagnosis?
1. Gastroparesis
2. Dyssynergic defecation
3. Chronic constipation
4. IBS
5. Psychological disorder
6. Functional dyspepsia

PAST TEST RESULTS AND EXAMINATION FINDINGS
• She had scarlet fever and a laparoscopy during the 3 years since her symptoms began; findings were normal
• Upper endoscopy, colonoscopy, computed tomography (CT) scan, stool examination and culture, and laboratory blood tests were normal
• General examination findings were unremarkable except for epigastric tenderness, no guarding, and the presence of stool in the rectum

What would you do next?
1. Water load test
2. Abdominal CT scan
3. Gastric barostat study
4. Anorectal manometry
5. Gastric emptying study
6. No further testing

(Continued on page 81)
transit constipation that is best treated with laxatives and prokinetic agents. Abnormal or normal colonic transit and abnormal anorectal manometry and balloon expulsion tests indicate dyssynergic defecation that is best treated with biofeedback therapy.

**DISCUSSION**

**Dr Chang**: How do you decide when to send a patient with refractory constipation for anorectal manometry? Is it the history of digital pressure or manual disimpaction maneuvers? What should the threshold be? I usually base my decision on physical examination findings, symptoms, and prolonged straining, although the prolonged straining doesn’t seem to be predictive of pelvic floor dyssynergia.

**Dr Rao**: If there’s a history of digital disimpaction and a finding of dyssynergia on the rectal examination, such as lack of pushing effort, absence of perineal descent, or paradoxical anal contraction, then I think that anorectal manometry and balloon expulsion tests are indicated. If these features are not present, it’s perfectly reasonable to manage these patients without manometric testing, at least initially. We can also try tegaserod, lubiprostone, or laxatives, and order more physiological testing if these agents fail.

**Dr Chang**: Your statement that defecography isn’t useful prompted me to think about patients who have had a normal balloon expulsion test, but still have a functional rectal obstruction. Can a patient have a normal balloon expulsion test and also have rectal prolapse? If it’s an internal prolapse or rectocele, it would be useful to get a defecogram.

**Dr Rao**: Defecography can reveal if there’s a rectocele or mucosal intussusception, or poor perineal descent or an impaired rectal stripping wave. However, we found that a combination of a colonic transit study, anorectal manometry, and balloon expulsion tests often identifies most patients. Usually, you don’t need additional defecography to make a diagnosis of dyssynergia or slow transit and initiate treatment, particularly in young women, and it also involves significant radiation to important organs. However, if patients don’t respond if they continue to have significant symptoms, then a much more detailed workup is needed.

I have a slightly different approach to rectocele, which I think is a sequel to excessive and prolonged straining in most patients. When patients push to defecate, the stool pushes the rectal wall anteriorly. If patients use a wrong posture, or if they paradoxically squeeze, then the stool cannot come out; instead it causes the anterior rectal wall to bulge and form a rectocele. If the underlying dysfunction is corrected, the stool can come out easily and the rectocele becomes an innocent bystander.

**Dr Leung**: Are there any studies showing that fiber supplements taken for a while will make the colonic muscles stronger?

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(Continued from page 80)

**CURRENT TEST RESULTS**

- Colonic transit: normal (only 2 of 24 markers were present)
- Gastric barostat study: normal accommodation response, with 198% increase in gastric volume after the meal; hypersensitive to gastric balloon distention
- Esophageal manometry and pH studies to detect acid reflux: normal
- Anorectal manometry: hypersensitive rectum without dyssynergia

What would be your diagnosis?

1. Functional dyspepsia
2. Food intolerance
3. IBS with constipation
4. Psychological disorder
5. Somatization disorder

**DISCUSSION**

**Dr Rao**: This case represents an overlap of symptoms between IBS with constipation and functional dyspepsia. The patient primarily presented with upper GI symptoms, but careful history and physiologic testing revealed significant findings of visceral hypersensitivity (IBS) that affected her lower bowel and upper gut.

Recall that recognition of such overlap and treatment of each component of GI dysfunction may lead to a more satisfactory clinical outcome. Therapeutic options include tegaserod, laxatives, low-dose antidepressants, and prokinetic agents with antinausea properties, such as metoclopramide or domperidone.
Dr Hasler: I’m not aware of any. There was a study in pigs done in 1980 that looked at the effects of 2 or 3 different doses of fiber on various motor patterns; it found that fiber could alter motility. However, I don’t think that the long-term effects of fiber on muscle thickness or motor function in humans have ever been looked at.

Dr Leung: I asked because I want to be able to tell my patients that there’s evidence that increased fiber will strengthen their colon muscles and make it easier to have a bowel movement. I don’t want to start and perpetuate a new myth.

Dr Rao: Let me suggest a new paradigm, and that is to show patients the Bristol stool chart. Let’s assume that they are Bristol type 1 or 2. Tell them that fiber is going to switch them to type 4, type 5, or even a type 6 stool that is easier to evacuate. Fiber will change the consistency of the stool, and there is evidence to support that.

Dr Lee: Do you feel we have good drugs and management strategies for constipation? Where do we need to improve?

Dr Rao: Dr Schiller’s study, which surveyed more than 500 patients who were taking medications for constipation for over a year, found that only 50% of them were satisfied with treatment. In other words, there is a large unmet need for better treatment regimens to improve bowel function. There is also a need for all of these medications that we use because constipation is a heterogeneous condition that is associated with several symptoms that may be caused by slightly different pathophysiologic mechanisms.

For example, lubiprostone may work by lubricating the stool in some patients or by increasing stool volume in others. Tegaserod may alter sensitivity in some patients and increase peristalsis in others. Alvimopan may have a role in patients taking opioids by blocking the peripheral and gut-related effects of opioid receptors.

Dr Hasler: I agree with you. Because constipation is multifactorial, it is unrealistic to expect a single drug or a single therapeutic modality to be effective across the board. One of the reasons we don’t have really effective drugs is that we don’t have a complete understanding of what regulates motor mechanisms in the colon. Although our so-called prokinetic therapies are the best that we have, and they are better than they were 10 or 20 years ago, they still aren’t all that effective at stimulating colonic propulsion.

Dr Bharucha: I agree with all of the earlier comments, but I’ll add 2 points. One is that dissatisfaction with treatment may partly reflect a gap between perception (ie, of what constitutes normal bowel habits) and symptoms. Patients are often reassured by the knowledge that it is unnecessary to have a bowel movement every day. It is also important to remind patients that the response to certain agents (ie, dietary fiber) may be gradual and not as pronounced as the response to a laxative.

Second, we know that a subset of patients with severe slow-transit constipation (without pelvic floor dysfunction) have fewer intrinsic nerves and interstitial cells of Cajal in the colon. Perhaps it is unrealistic to expect much benefit from drugs in these patients.

Better therapy is needed for all of these reasons, but we also have to address tolerance to medications and the need to switch to something else, in addition to the need for multiple agents in patients with severe constipation to increase bowel movement frequency and alleviate bloating. Sometimes they need a combination of drugs, each with a different mechanism of action.

A final point is that we should not focus only on pharmacologic therapy and the gut, but also on any psychological symptoms that may be present. Patients with severe constipation often require a multimodal approach to therapy.

REFERENCES