



Common Functional Gastroenterological Disorders Associated With Abdominal Pain

Adil E. Bharucha, MBBS, MD; Subhankar Chakraborty, MBBS, PhD;
and Christopher D. Sletten, PhD, LP



From the Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN (A.E.B., S.C.); and Division of Psychology, Department of Pain Medicine, Mayo Clinic, Jacksonville, FL (C.D.S.).

CME Activity

Target Audience: The target audience for *Mayo Clinic Proceedings* is primarily internal medicine physicians and other clinicians who wish to advance their current knowledge of clinical medicine and who wish to stay abreast of advances in medical research.

Statement of Need: General internists and primary care physicians must maintain an extensive knowledge base on a wide variety of topics covering all body systems as well as common and uncommon disorders. *Mayo Clinic Proceedings* aims to leverage the expertise of its authors to help physicians understand best practices in diagnosis and management of conditions encountered in the clinical setting.

Accreditation: Mayo Clinic College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Credit Statement: Mayo Clinic College of Medicine designates this journal-based CME activity for a maximum of 1.0 *AMA PRA Category 1 Credit(s)*.™ Physicians should claim only the credit commensurate with the extent of their participation in the activity.

MOC Credit Statement: Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 1 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Learning Objectives: On completion of this article, you should be able to: (1) recall the epidemiology of gastroenterological disorders associated with abdominal pain; (2) evaluate clinical features to make a precise clinical diagnosis; and (3) select appropriate diagnostic tests and therapeutic options.

Disclosures: As a provider accredited by ACCME, Mayo Clinic College of Medicine (Mayo School of Continuous Professional Development) must ensure balance, independence, objectivity, and scientific rigor in its educational activities. Course Director(s), Planning Committee members, Faculty, and all others who are in a position to control the content of this educational

activity are required to disclose all relevant financial relationships with any commercial interest related to the subject matter of the educational activity. Safeguards against commercial bias have been put in place. Faculty also will disclose any off-label and/or investigational use of pharmaceuticals or instruments discussed in their presentation. Disclosure of this information will be published in course materials so that those participants in the activity may formulate their own judgments regarding the presentation. In their editorial and administrative roles, William L. Lanier, Jr, MD, Terry L. Jopke, Kimberly D. Sankey, and Nicki M. Smith, MPA, have control of the content of this program but have no relevant financial relationship(s) with industry. Dr Bharucha has received personal fees from Allergan Inc, Johnson & Johnson Inc, Medspira, Ironwood Pharmaceuticals, Inc., Gl Care Pharma, the National Center for Pelvic Pain Research, Salix, Macmillan Medical Communications, FORUM Pharmaceuticals, outside the submitted work. In addition, Dr Bharucha has a patent on the anorectal manometry device, with royalties paid to Medspira, and a pending patent on the anorectal manometry probe fixation device licensed to Medtronic.

Method of Participation: In order to claim credit, participants must complete the following:

1. Read the activity.
2. Complete the online CME Test and Evaluation. Participants must achieve a score of 80% on the CME Test. One retake is allowed. Visit www.mayoclinicproceedings.org, select CME, and then select CME articles to locate this article online to access the online process. On successful completion of the online test and evaluation, you can instantly download and print your certificate of credit.

Estimated Time: The estimated time to complete each article is approximately 1 hour.

Hardware/Software: PC or MAC with Internet access.

Date of Release: 8/1/2016

Expiration Date: 7/31/2018 (Credit can no longer be offered after it has passed the expiration date.)

Privacy Policy: <http://www.mayoclinic.org/global/privacy.html>

Questions? Contact dletsupport@mayo.edu.

Abstract

Although abdominal pain is a symptom of several structural gastrointestinal disorders (eg, peptic ulcer disease), this comprehensive review will focus on the 4 most common nonstructural, or functional, disorders associated with abdominal pain: functional dyspepsia, constipation-predominant and diarrhea-predominant irritable bowel syndrome, and functional abdominal pain syndrome. Together, these conditions affect approximately 1 in 4 people in the United States. They are associated with comorbid conditions (eg, fibromyalgia and depression), impaired quality of life, and increased health care utilization. Symptoms are explained by disordered gastrointestinal motility and sensation, which are implicated in various peripheral (eg, postinfectious inflammation and luminal irritants) and/or central (eg, stress and anxiety) factors. These disorders are defined and can generally be diagnosed by symptoms alone. Often prompted by alarm features, selected testing is useful to exclude structural disease. Identifying the specific diagnosis (eg, differentiating between functional abdominal pain and irritable bowel syndrome) and establishing an effective patient-physician relationship are the cornerstones of therapy. Many patients with mild symptoms can be effectively managed with limited tests, sensible dietary modifications, and over-the-counter medications tailored to symptoms. If these measures are not sufficient, pharmacotherapy should be considered for bowel symptoms (constipation or diarrhea) and/or abdominal pain; opioids should not be used. Behavioral and

psychological approaches (eg, cognitive behavioral therapy) can be helpful, particularly in patients with chronic abdominal pain who require a multidisciplinary pain management program without opioids.

© 2016 Mayo Foundation for Medical Education and Research ■ Mayo Clin Proc. 2016;91(8):1118-1132

This review will focus on nonstructural, or functional, rather than structural (eg, peptic ulcer disease and ulcerative colitis) gastrointestinal (GI) disorders associated with abdominal pain.¹ Symptoms provide the basis for classifying the functional disorders, which affect the entire GI tract (Figure 1). Many physicians refer to these conditions with the umbrella term *irritable bowel syndrome* (IBS). It is critical to recognize that although these conditions share several features, they can and should be distinguished from each other primarily on the basis of the nature of symptoms (Figure 2). These specific diagnoses are not only more precise but also facilitate management, which is tailored to the specific symptoms. This review will focus on the 4 most common functional disorders associated with abdominal pain: functional dyspepsia, constipation-predominant and diarrhea-predominant IBS, and functional abdominal pain syndrome.

METHODS

We searched MEDLINE on the PubMed and Ovid platforms, as well as the Cochrane Database of Systematic Reviews, using the keywords *abdominal pain*, *chronic abdominal pain*, *abdominal wall pain*, *visceral pain*, *narcotic bowel*, and *functional abdominal pain* for English-language articles with no date restrictions. Search terms were cross-referenced with review articles, and additional articles were identified by manually searching reference lists.

EPIDEMIOLOGY AND NATURAL COURSE

In North America, approximately 20% of adults have symptoms of dyspepsia and 10% to 15% have symptoms of IBS.^{2,3} Among the latter, approximately 5% each have diarrhea- and constipation-predominant IBS, which are more common in men and women, respectively.² By comparison, the prevalence of functional abdominal pain is much lower (0.5%-1.7%).⁴ Even this figure is probably an overestimate,

because the definition of functional abdominal pain in these studies did not incorporate all the criteria for functional abdominal pain syndrome, such as the loss of daily function associated with the pain. Most cases of IBS are diagnosed by primary care specialists.⁵

It is not uncommon for patients to simultaneously have symptoms of 2 or more disorders (eg, dyspepsia and constipation).⁶ The severity and nature of symptoms vary with time. Over the long term, symptoms were unchanged in 50%, worse in approximately 20%, and improved in 30% of patients with IBS seen in clinics.⁷ In the general population, approximately 20% of patients with IBS had the same symptoms, 40% had no symptoms, and 40% had different symptoms at follow-up 12 years later.⁸ The nature of symptoms may change over time, most frequently from constipation- or diarrhea-predominant IBS to mixed type or vice versa.⁹ In postinfectious IBS, the prognosis is better; symptoms resolve in approximately 50% of patients after 6 to 8 years.¹⁰

RELEVANT ANATOMY, PHYSIOLOGY, AND PATHOPHYSIOLOGY

Clinically Oriented Introduction to GI Motor and Sensory Functions

Motility is regulated by coordinated neurohormonal mechanisms that affect smooth muscle contractility.¹¹ Gut motor activity is primarily controlled by the intrinsic or enteric nervous system. The central nervous system modulates gut motor activity via the extrinsic sympathetic and parasympathetic pathways, whereas descending pathways in the spinal cord modulate transmission of sensory input from the dorsal horn to supraspinal centers. Visceral sensation is conveyed via afferents that travel to the spinal cord and ultimately to the cerebral cortex, as well as through the vagus to the brainstem. There is a 10:1 ratio of afferent to efferent fibers in the vagus at the level of the diaphragm. The vagus primarily conveys subnoxious messages, whereas the spinal afferents

Download English Version:

<https://daneshyari.com/en/article/10165417>

Download Persian Version:

<https://daneshyari.com/article/10165417>

[Daneshyari.com](https://daneshyari.com)