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Revised and Updated, 2009

Current Approach to the Diagnosis of Irritable Bowel Syndrome

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Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder that affects 10% to 20% of people worldwide. A substantial proportion of patient visits to primary physicians for gastrointestinal complaints and referrals to gastroenterologists are for IBS. The symptoms interfere with various aspects of patients' lives. Some patients also have considerable anxiety about what is causing their symptoms. A confident diagnosis is the physician's initial and crucial step in providing a clear explanation, effective treatment, and reducing anxiety. Therefore, many people are interested in the current approach to the diagnosis of IBS.

In the past three decades, medical opinion has changed regarding how to diagnose IBS. The older view emphasized that IBS should be regarded primarily as a "diagnosis of exclusion," that is, diagnosed only after diagnostic testing excludes many disorders that could possibly cause the symptoms. Because many medical disorders can produce the cardinal features of IBS, in particular abdominal discomfort or pain and disturbed bowel habit, this approach often led to extensive diagnostic testing in many patients. But there is no end to the studies that can be done to exclude other diagnoses. The perceived need by both physicians and patients to pursue other diagnoses rests in part with their limited understanding of IBS. It is a real condition with well defined clinical features and specific diagnostic criteria; this recognition can reduce unneeded testing.

While diagnostic testing is useful in evaluating certain problems, their routine or indiscriminate use can cause unnecessary inconvenience and cost for patients, and complications can even occur. Therefore, it is important that physicians diagnose IBS by recognizing certain symptom details, performing a physical examination, and undertaking limited diagnostic testing. A recent addition to the evolving diagnostic criteria is the exclusion of "red flags," which are certain clinical features in the history or examination, such as blood in the stool or an abnormal physical finding that can guide the diagnostic testing. In fact the absence of the several red flags, provide confidence that diagnostic testing to rule out other conditions is *not* needed. This simpler approach is accurate, less expensive, and less burdensome to physician and patient alike; furthermore it permits proper attention toward management rather than the unneeded and expensive pursuit of other diagnoses.

Typical Symptoms

The most important step for a doctor in diagnosing IBS is obtaining a description of the symptoms experienced. The symptom criteria for the diagnosis have been evolving since 1978, when important research by Manning and his colleagues proved the usefulness of certain symptoms (Manning criteria) to distinguish patients with IBS from patients with structural diseases. Later, Kruis and other physicians developed a symptom scoring system to identify IBS. In 1990, a multinational committee of specialists developed a classification system for all the functional GI disorders including IBS. The original consensus criteria for IBS published in 1989 were modified to become the Rome criteria in 1990, the Rome II criteria in 2000, and most recently the Rome III criteria in 2006. With each revision, diagnosis was made more precise and easier to use. These symptom criteria have been used extensively in research on IBS over the last 15 years, and are now being used increasingly by physicians in clinical practice. Specialists from around the world work in committees to produce these revisions, ultimately leading to the Rome III criteria (Table 1).

Table 1. The Rome III Diagnostic Criteria*

Recurrent abdominal pain or discomfort** at least 3 days per month in the last 3 months associated with 2 or more of the following:

- 1) Improvement with defecation
- 2) Onset associated with a change in frequency of stool
- 3) Onset associated with a change in form (appearance) of stool

* Criterion fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis.

** "Discomfort" means an uncomfortable sensation not described as pain.

The essential feature of IBS is abdominal pain. As noted, the hallmark of the diagnosis is that the abdominal pain is improved by a bowel movement and is associated with a change in bowel habit, meaning the frequency or consistency of stools (either loose/watery stools or hard/lumpy stools) changes when the pain occurs. In fact

IBS can be subtyped into categories: IBS with constipation (IBS-C), IBS with diarrhea (IBS-D), or mixed IBS (IBS-M) (Figure 1).

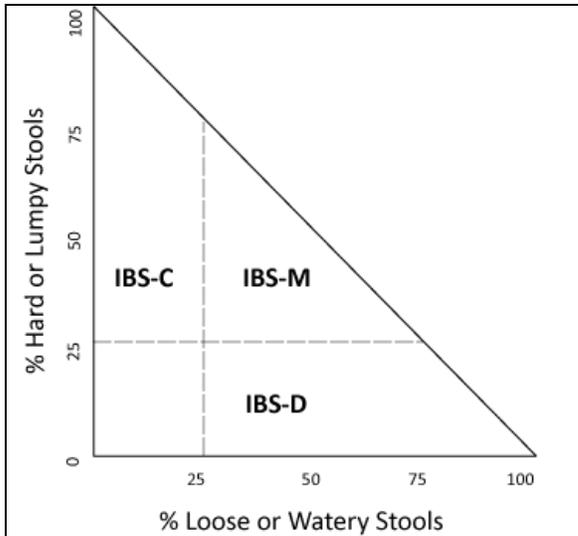


Figure 1. IBS Subtypes

IBS may be subtyped by the predominant stool pattern during bowel movements (in the absence of anti-diarrheal or laxative use). Stool patterns tend to change over time.

The Rome III criteria are reliable only when there is no abnormal intestinal anatomy or abnormality in the metabolic process that would explain the symptoms. In other words, results from a physical examination and additional diagnostic testing, as needed, are negative. Certain red flags or “alarm signs” call for special consideration of other disorders before symptoms can be attributed to IBS. These signs include:

- Age of 50 or older
- Blood in the stools
- Nighttime symptoms that awake the individual
- Unintentional weight loss
- Change in the symptom quality (e.g., new and different pain)
- Recent use of antibiotics
- A family history of other gastrointestinal diseases like inflammatory bowel disease or cancer.

Notably, a separate, benign problem is often found that explains these signs. For example, rectal bleeding with features typical of an anal origin that is reported by patients with an unchanged, chronic pattern of IBS symptoms is usually found to be caused by hemorrhoids. There are some typical symptom features that are not part of the various standard symptom criteria. An example is the frequent worsening of IBS symptoms during menstrual periods. This characteristic and the frequent location of pain in the lower abdomen can result in a search for gynecological disease to explain what gynecologists call “pelvic pain.” However, an association of pain relieved

with defecation and associated with bowel dysfunction points toward IBS as a more likely cause than a gynecological disorder. Nevertheless, this fact should not dissuade women from having a pelvic examination during routine check-ups or when indicated by their symptoms.

Some individuals have pain and diarrhea at predictable times and this can fluctuate in severity. It can occur soon after arising in the morning, after meals, when feeling emotionally distressed, or in association with specific activities. Such diarrhea can often be prevented by an anti-diarrheal medication taken before the precipitating activity. IBS is a chronic and recurring disorder, in fact, symptom chronicity should be expected, and this feature further supports a diagnosis of IBS.

In addition to pain and bowel dysfunction, a variable proportion of IBS patients suffers from other chronic functional symptoms or psychological difficulties. These problems can include fibromyalgia (muscle aching), headaches, dyspepsia (upper abdominal discomfort or pain), chest pain, urinary or gynecological symptoms, insomnia, anxiety and depression. Each of them may require a directed diagnostic approach.

Biological Markers?

IBS can be confidently diagnosed by a doctor using positive symptom criteria during the history, a physical examination, and the absence of alarm signs. While there currently is no consistent biological marker of IBS that can be used to make the diagnosis, ongoing research interest is underway to find a biological marker, or set of markers, using a blood test, stool sample, or colonic tissue sample to enhance the diagnostic accuracy of symptom criteria.

Diagnostic Testing

An experienced physician’s judgment is paramount in determining what tests are needed. Testing is individualized depending on factors such as age, sex, family history of gastrointestinal disease, presence of stress or other psychological factors, specific symptom predominance, symptom duration and severity, presence of non-IBS symptoms, and test availability and cost. The tests that are especially relevant to the evaluation of IBS symptoms include:

Blood Tests – A complete blood count is often done to check for anemia and other abnormalities. Other tests may be performed, including an erythrocyte sedimentation rate [indicates if tissue damage or inflammation is present] and a test for celiac disease.

Stool Tests – The most common fecal examinations check for a bacterial infection, an intestinal parasite, or occult (hidden) blood in the stool.

Sigmoidoscopy or Colonoscopy – These direct visual examinations of the rectum and sigmoid portion of the large bowel (sigmoidoscopy) or the entire large bowel (colonoscopy) are performed with an endoscope. They are usually done when there are alarm signs such as rectal bleeding or weight loss or as part of diagnostic screening for colon cancer after age 50.

Barium Enema – This is a radiologic (x-ray) examination of the large bowel that is performed by taking x-ray pictures of the bowel after it has been distended with a barium-containing liquid and air. This test has for the most part been supplanted by colonoscopy. The amount of radiation involved is usually not worrisome, but women who are pregnant or unsure whether they are pregnant should tell their physician, as this test should not be done in such cases.

Psychological Tests – Questionnaires that detect anxiety, depression or other psychological problems may be used to supplement the evaluation routinely or applied in special circumstances.

Miscellaneous Tests – Other tests (Table 2) may be done depending on specific aspects of an individual’s illness, especially atypical symptoms or alarm signs. However, many patients do not require these or other miscellaneous tests.

Summary

A knowledgeable physician can diagnose IBS by careful review of the patient’s symptoms, a physical examination, and selected diagnostic procedures that are often limited to a few basic tests. Such a diagnosis is quite secure, as follow-up for many years of confidently diagnosed patients seldom discloses another cause for their symptoms. With an unequivocal diagnosis, both patient and physician can work together on the most effective management.

| Test | Purpose |
|-------------------------------|---|
| Anorectal manometry | To measure the function of muscles and nerves of the anus and rectum |
| Blood biomarker profile | To distinguish IBS from other medical disorders. This test is available but requires refinement to achieve sufficient accuracy for routine screening evaluation |
| Capsule endoscopy | An accurate way to detect Crohn’s disease or other abnormalities of the small intestine |
| Colonic transit | To measure the rate of movement of contents in the colon |
| Hydrogen breath test | To detect lactase deficiency (lactose intolerance) |
| Lactulose/glucose breath test | To detect bacterial overgrowth syndrome |
| Upper GI X-ray (barium) | To examine the small intestine |

Suggested Reading

The book, *Rome III: The Functional Gastrointestinal Disorders*, published in 2006, comprehensively covers IBS and the other functional disorders. The book may be ordered by going to www.theromefoundation.org.

The book, *Understanding the Irritable Gut*, published in 2008, provides a condensed version of the *Rome III* book; it is designed especially for primary care providers as well as patients and is also available at www.theromefoundation.org.

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