

Irritable bowel syndrome (IBS) is amongst most common clinical condition presenting to physicians and gastroenterologists in day to day clinical practice. While IBS is not a life threatening disease, it leads to considerable expenditure and effects quality of life. It is thus important to have a basic knowledge of IBS so that patients can be given effective treatment and excessive futile investigations can be prevented.

### DIAGNOSTIC CRITERIA

Various diagnostic criteria have been proposed to diagnose IBS. The first proposed criteria were Manning's followed by Rome 1, Rome 2, Rome 3 and recently Rome 4 criteria (Box 1). Besides, an Asian consensus was also

#### Box 1: Diagnostic Criteria

##### Manning's criteria

Includes any four of the following:

- a. Abdominal pain that is relieved with a bowel movement
- b. Pain associated with looser stools
- c. Pain associated with more frequent stools
- d. Sensation of incomplete evacuation
- e. Passage of mucus
- f. Abdominal distention

*No symptom duration is specified in Manning's criteria*

##### Rome 4 Criteria:

Recurrent abdominal pain, on average, at least 1 day per week in the last 3 months, associated with 2 or more of the following criteria:

1. Related to defecation
2. Associated with a change in frequency of stool
3. Associated with a change in form (appearance) of stool

*Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis.*

##### ASIAN consensus

Recurrent abdominal pain, bloating, or other discomfort for  $\geq 3$  months associated with one or more of the following:

- a. Relief with defecation
- b. Change in stool form (show patient the Bristol Stool Scale)
- c. Change in stool frequency

proposed in 2010 to account for cultural and linguistic differences between the west and Asia region.

### CHANGES IN THE RECENT ROME 4 CRITERIA

In contrast to the earlier Rome III criteria, the term discomfort has been eliminated because not all languages have a word for "discomfort," it has different meanings in different languages, and the term is ambiguous to patients.

The current definition also involves a change in the frequency of symptoms; stating that patients should have abdominal pain at least 1 day per week during the past 3 months. This is in contrast to Rome III criteria, which defined IBS as the presence of abdominal pain (and discomfort) at least 3 days per month.

Another notable change is that the phrase "improvement with defecation" has been modified to "related to defecation" as a large subset of IBS patients do not have an improvement in abdominal pain with defecation, but instead report a worsening. Similarly, the word onset was deleted from criteria 2 and 3 of the Rome III definition, as not all IBS patients report the onset of abdominal pain directly coinciding with a change in stool frequency or form.

### DIFFERENCES BETWEEN ASIAN CONSENSUS AND ROME CRITERIA

The Asian consensus which was published in 2010 provided some very important insights which can be used in clinical practice.

The most important difference is that Asian consensus also recognizes bloating as an IBS symptom apart from abdominal pain and discomfort. There is a common perception among clinicians that bloating is a symptom of an upper GI disorder. But in a review of Asian IBS series; it was found that bloating occurs almost as commonly as abdominal pain, and is an important reason for consultation.

Another issue which has been recognized in Asian consensus is the site of abdominal pain or discomfort. It is noted that patient with IBS may not necessarily present with lower abdominal pain but instead a large proportion of them present with upper abdominal pain. The site of abdominal pain or discomfort is not included as a criterion in either Rome or Asian statement, but it is important to recognize that IBS patients can present with upper abdomen symptoms also. In a study from Taipei, more than 50 % of patients who were diagnosed initially

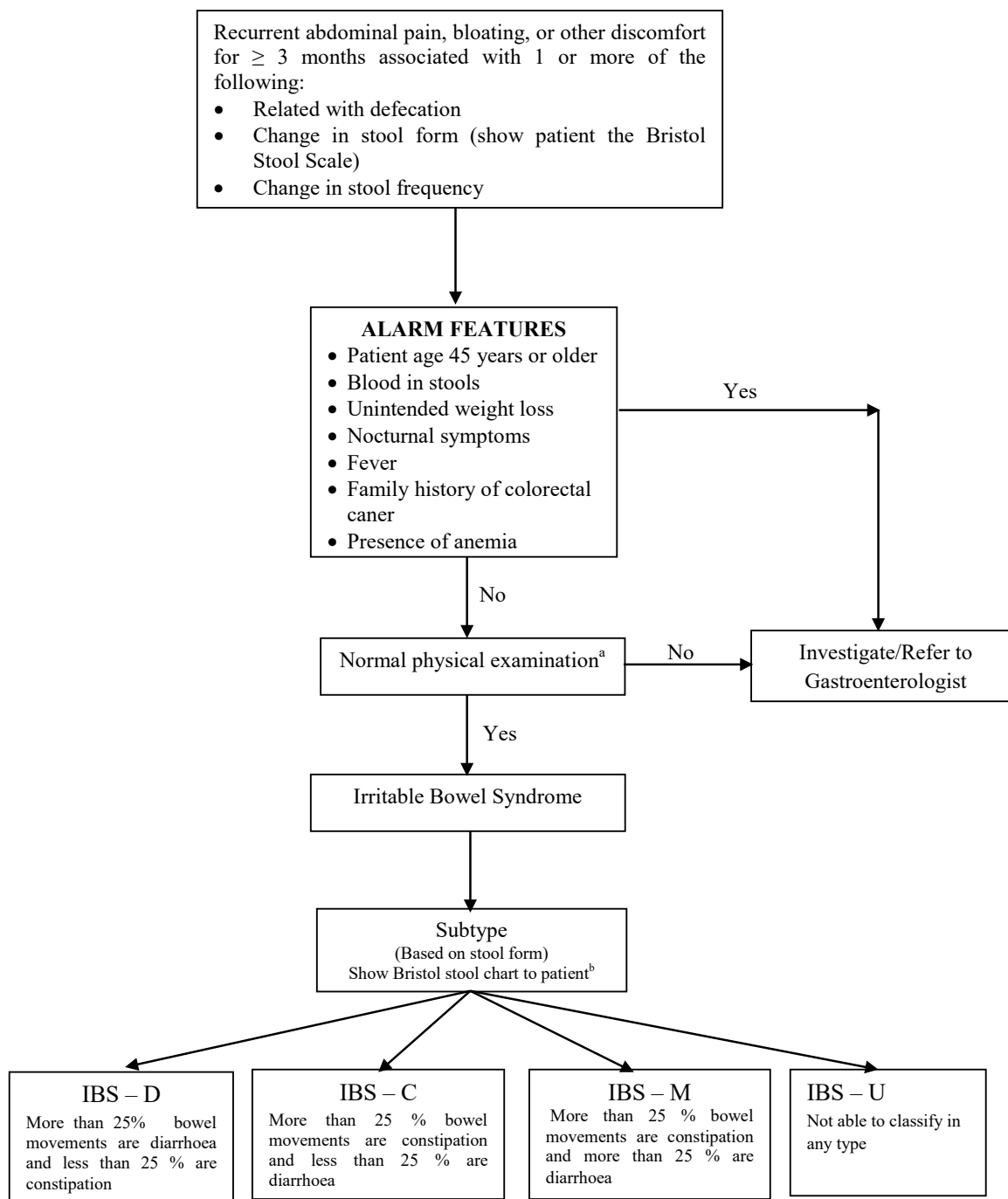
**Table 1: Frequency of IBS using the Manning, Rome I, Rome II, and Rome III, and Asian criteria in patients with lower functional gastrointestinal disorder (n=1,618) in MIBS study**

Diagnostic Criteria	Positive (%)	Negative (%)
Manning	1476 (91.2)	142 (8.8)
Rome 1	1098 (67.9)	520 (32.1)
Rome 2	649 (40.1)	969 (59.9)
Rome 3	849 (52.5)	769 (47.5)
Asian	1206 (74.5)	412 (25.5)

as functional dyspepsia based on upper abdominal discomfort were later found to have IBS. Thus, it is not advisable to exclude a diagnosis of IBS on the basis of site of abdominal pain. Rather it is necessary to ask about the relation of such symptoms with bowel movements and change in bowel habits (either a change in stool form or frequency) to determine the intestinal origin of symptoms.

### APPLICABILITY IN INDIAN SCENARIO

A multicentre study by Ghoshal et al compared Manning's, Rome 1, Rome 2, Rome 3 and Asian consensus



*a, limited investigation in the form of complete blood count and ESR/CRP or fecal calprotectin has been recommended in Rome 4 statement*

*b, Bristol stool form 1-3: constipation; 5-7: diarrhea*

**Fig. 1: Algorithm for diagnosis and subtyping of IBS**

294 criteria for diagnosing IBS and found Manning's criteria to be most sensitive in Indian patients. Rome 2 criteria were found to be least sensitive. Asian criteria identified the most number of patients after Manning's (Table 1). The better performance of Manning's and Asian criteria highlights that recognition of bloating as an IBS symptom. Based on this study, we can say that Manning's and Asian consensus criteria are better suited for Indian patients in routine clinical practice. However, for the purpose of patient identification in IBS trials; the current Rome criteria which are most widely used should be applied.

### MAKING THE DIAGNOSIS

We now know that multiple criteria have been proposed for the diagnosis of IBS and their major drawbacks and advantages. But these criteria are not routinely used in clinical practice as has been shown in both European as well as Asian studies. In Hong Kong, it was reported that only 21% of patients who fulfilled IBS criteria had received the diagnosis when seen by their medical practitioners.

The key to diagnose IBS is to determine that the bowel is the site of origin of symptoms. The relation of abdominal pain or discomfort or bloating to bowel movements or change in stool frequency or consistency indicates that these symptoms are due to intestinal disease. A detailed history pertaining to alarm features and a thorough physical examination are also essential for diagnosis. Physical examination helps in excluding organic diseases and also builds patient-physician relationship which is the most important factor in successful treatment of these patients. Even in the absence of fulfillment of the criteria; a diagnosis of IBS can be made if it can be confidently established that symptoms are of bowel origin through proper history, absence of alarm features, normal physical examination and normal minimal investigations (if required). Based on this premise, we propose an algorithm which is easy to use in routine clinical practice to achieve a diagnosis of IBS (Figure 1).

### IDENTIFICATION OF IBS SUBTYPE

Four subtypes of IBS are proposed: IBS -D (diarrhea predominant), IBS -C (constipation predominant), IBS-M (Mixed) and IBS -U (Unclassified). The subtypes were initially identified on the basis of stool frequency. But the sub typing of IBS using stool frequency is based on western habits and is often incorrect in Indian setting. Indian patients with constipation often report to have 1-2

bowel movements per day. In the Indian community, less than 1% of patients had stool frequencies of fewer than three per week, while among IBS patients, the median stool frequency was twice a day, regardless of whether they had constipation or diarrhea. Ghoshal et al identified that stool form (by Bristol stool chart) and patients' own characterization of their disease are better methods for identification of IBS subtype rather than stool frequency. Rome 4 criteria also identify IBS subtype by stool form. Subtyping is necessary as it helps in making decisions regarding initial treatment.

### TAKE HOME MESSAGE

1. It is necessary to make a diagnosis of IBS to start appropriate treatment and prevent unnecessary investigations.
2. Abdominal bloating is a common symptom of IBS, especially in Asian patients.
3. Upper abdominal symptoms do not necessarily rule out the diagnosis of IBS.
4. Diagnosis of IBS requires that symptoms are of bowel origin, absence of alarm features, and normal physical examination.
5. Minimal investigations may be required in a subset of patients in the form of blood counts and inflammatory markers (ESR/ CRP/ Fecal calprotectin).
6. Detailed investigations and colonoscopy is required only in the presence of alarm features or abnormalities on initial investigations.
7. Subtyping should be done based on stool form, to guide initial treatment.

### REFERENCES

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