UNIT NO. 6

DIAGNOSIS & MANAGEMENT OF THE IRRITABLE BOWEL SYNDROME

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ABSTRACT

The irritable bowel syndrome (IBS) is a condition characterised by abdominal pain, bloating or other discomfort occurring in association with disturbed bowel movement in the absence of major structural or organic cause that can be detected by routine medical tests. What is the best way to identify IBS patients? The first widely recognized set of criteria was the Manning Criteria. Since 1994 the Rome Criteria has been developed largely by US and European researchers. Presently the Rome criteria are employed primarily for research. ANMA has now developed a set of expert consensus statements providing recommendations on a clinical approach to the diagnosis of IBS. At the primary care level, use of a screening algorithm comprising symptom criteria, a checklist of alarm features and guidelines on monitoring procedure, is recommended. The aims of IBS treatment are symptom relief and improvement in quality of life. A good doctor-patient relationship is important in the management of IBS. Physicians should try to identify the contributing factors and address the patient's concerns. Management of IBS should be individualized and target all bothersome symptoms, IBS subtypes, severity of symptoms and contributing factors including psycho-social issues.

SFP 2008; 35(1): 35-40

INTRODUCTION

There are three main questions to be addressed

- What is the best way to identify IBS patients?
- What is the minimum number of relevant investigations?
- What is the optimum management?

DEFINITIONS

The irritable bowel syndrome (IBS) is a condition characterised by abdominal pain, bloating or other discomfort occurring in association with disturbed bowel movement in the absence of major structural or organic cause that can be detected by routine medical tests[1]. By definition, the diagnosis of IBS implies that there is no organic cause that can account for the symptoms. However, we should bear in mind that recent research employing more sensitive methods may demonstrate inflammatory, cellular, and molecular differences between IBS patients and controls[2-3]. Currently these are not part of routine medical tests, and as yet, have no clinically relevant or proven therapeutic implications.

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DIAGNOSTIC CRITERIA

As IBS has no objective marker, several symptom based diagnostic criteria based have been proposed and developed over time. The first widely recognized set of criteria was the Manning Criteria[4]. Since 1994 a set of criteria known as the Rome Criteria has been developed largely by US and European researchers. The current set is known as the Rome III Criteria[5].

Rome III diagnostic criteria* for irritable bowel syndrome

Recurrent abdominal pain or discomfort** at least 3 days a month in the past 3 months, associated with two or more of the following:

Improvement with defecation
Onset associated with a change in frequency of stool
Onset associated with a change in form (appearance) of stool
*Criteria fulfilled for the past 3 months with symptom onset at least 6 months before diagnosis.

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

Limitations of the Rome criteria

Presently the Rome criteria are employed primarily for research. Surveys from various centres report that most doctors, both general practitioners (GPs) and specialists do not use the Rome criteria. In a study from the UK, only 4% of GPs had ever used the Rome criteria, and about 80% of GPs had no knowledge of any of the specific criteria[6]. In a survey by the European Society for Primary Care Gastroenterology involving 6 European countries, 77% of all GPs were not familiar with any of the diagnostic criteria, and of those who were, only 20% actually used these criteria in clinical practice[7]. In a survey of 30 GPs in Singapore 77% did not use the Rome criteria and 80% could not list any of the 3 symptoms (KA Gwee personal communication).

Asian Consensus on IBS Diagnostic Algorithm

Recently an organization called the Asian Neurogastroenterology & Motility Association (ANMA) (www.asianmotility.org) was formed. ANMA has now developed a set of expert consensus statements providing recommendations on a clinical approach to the diagnosis of IBS1. At the primary care level, use of a screening algorithm comprising symptom criteria, a checklist of alarm features and guidelines on monitoring procedure, is recommended. The suggested algorithm is given below. Note that time is used both as a diagnostic and therapeutic tool.

This approach is advocated over the use of the Rome criteria. The 3 months' duration of symptoms is applied to permit differentiation from acute causes. It is highlighted that patients presenting with abdominal pain, discomfort or bloating in any part of the abdomen should be considered for IBS screening to overcome the problem of under recognition of IBS. One study from Hong Kong reported that only 21% of IBS subjects seen by western medical practitioners were told that they were suffering from IBS, and instead 64% received a diagnosis of gastroenteritis[9]. In another study from Singapore, 28% of patients assessed by GPs to have acid related dyspepsia with a view to treatment with proton pump inhibitors, were actually having IBS[10]. Probable IBS is proposed as an interim label to enable the clinician to consider IBS diagnosis at an early stage. However, the clinician is expected to then proceed to the recommended level of workup appropriate to the patient population. This approach is meant for clinical practice and does not necessarily apply to subjects taking part in a community survey. For community surveys and clinical trials, the current Rome criteria should be applied.

Alarm features

Particular note should be taken of recent guidelines and evidence that suggest the practice of attributing fresh rectal bleeding to hemorrhoidal bleeding as being unsupportable. The Association of Coloproctologists of Great Britain and Ireland guidelines on management of colorectal cancer recommend that rectal bleeding combined with a change in bowel habit and in the absence of anal symptoms should be fully investigated, as a significant number will have colorectal cancer (www.acpgbi.org.uk/download/ GUIDELINES-bowelcancer.pdf). A large recent study in an unselected gastroenterology outpatient clinic in Australia indicated that age over 50 years and rectal bleeding of any type were significantly commoner in those with a final diagnosis of organic disease, and should therefore lead to full evaluation before a final diagnosis of IBS is made[11].

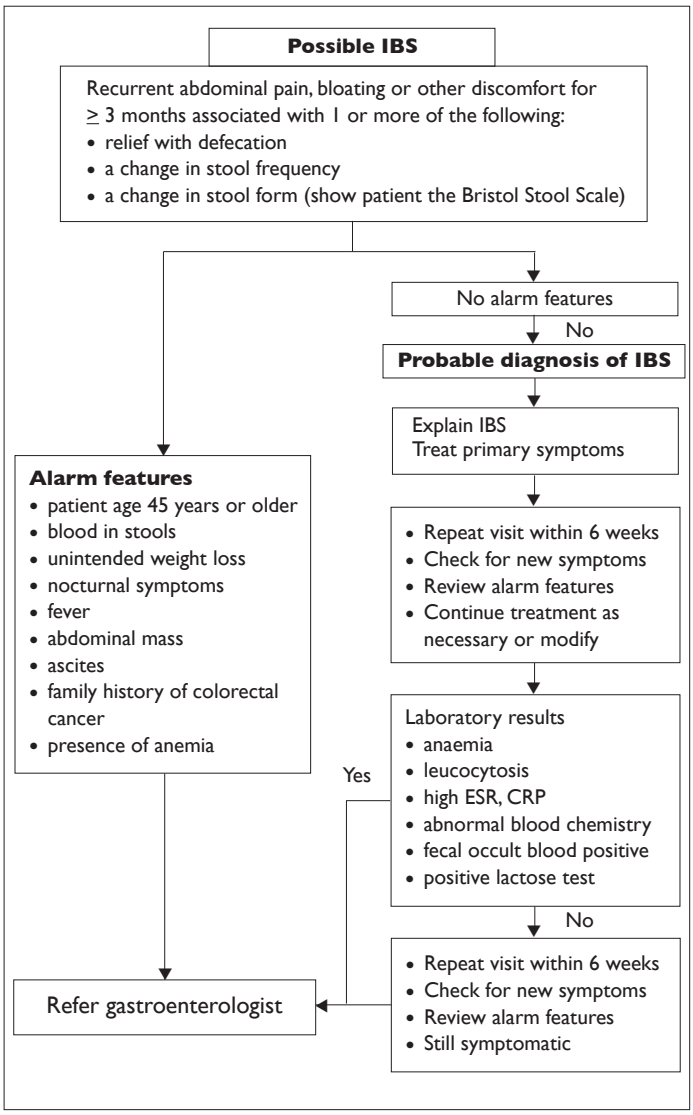
CLINICAL FEATURES OF IBS

Bowel Symptoms

The characteristic of abdominal pain, bloating or other discomfort that is relieved by defecation or flatus suggests a colonic origin, while the association with change in stool frequency or consistency suggests a link to changes in intestinal transit, which might reflect changes in either motor patterns or secretion[4,12,13].

An important feature is that symptoms are chronic or recurrent, so as to distinguish them from those caused by other conditions such as infections, where the effects are often transient, or progressive diseases such as bowel cancer, which are usually diagnosed within six months of symptom onset.

Table 1: IBS Diagnosis Algorithm



Bloating is an important symptom of IBS. In numerous series both from the west and the east, bloating is reported almost as commonly as abdominal pain or discomfort by IBS subjects, both in the clinics and in the community. Bloating is an important reason for patient consultation and in some series it has also been reported to be the most bothersome of IBS symptoms. The proportion of IBS subjects experiencing bloating is higher than the proportion of dyspeptic subjects experiencing bloating Post-prandial bloating may occur in IBS. Several motility studies provide evidence to support an impaired post-prandial colonic motility response in IBS patients. In the Rome III classification system, bloating is no longer considered to be a symptom of functional dyspepsia. Failure to recognise that IBS is an important cause of bloating may result in misdiagnosing the bloating in some patients as being caused by gallstones and GERD.

Stool patterns

The patient's bowel pattern should be described by indicating the stool type according to the Bristol stool scale and by checking

specifically for defecation symptoms of straining at stool, feeling of incomplete defecation and urgency.

Doctors should not simply ask whether a patient has constipation or diarrhoea, but should enquire for specific defecatory symptoms as recommended above. IBS patients in Asia may appear to have normal bowel habits by western definitions. In a community study from Singapore 77% of subjects with IBS thought they had a normal bowel habit, and yet, when they were asked specific questions relating to defecatory symptoms, 50% had criteria for constipation, 25% for diarrhoea, and 4% for an alternating habit[14]. This may give rise to a situation where the patient does not recognise the association with abdominal pain or discomfort unless patients are asked specific symptoms.

The Rome III subclassification is based solely on stool consistency. Patients with hard stools more than 25% of the time and loose stools less than 25% of the time are defined as "IBS with constipation" (IBS-C) while "IBS with diarrhoea" (IBS-D) patients have loose stools more than 25% of the time and hard stools less than 25% of the time. "IBS-mixed" (IBS-M), who describe both hard and soft stools more than 25% of the time, with a small (4%) unclassified (IBS-U), with neither loose nor hard stools more than 25% of the time. Those whose bowel habit changes from one subtype to another during follow up over months and years are termed "alternators".

Food related symptoms

The Rome criteria concentrate on the relationship of symptoms to changes in stool frequency and consistency, and the relief of pain or discomfort with defecation. They do not however, take into account the relationship to a meal. However, many IBS patients may present with meal related symptoms which include bloating, sensations of fullness or the presence of wind or gas. One study from Sweden found that even though 50% of patients felt that defecation relieved their pain, daily symptom recording over a period of 6 weeks revealed that pain was relieved within 30 minutes of defecation on only 10% of occasions[16]. However, on 50% of occasions pain was aggravated within 90 minutes of eating. This suggests that the pain in IBS patients may actually bear a stronger temporal relationship to eating than to defecation. Furthermore, pathophysiological studies in IBS support a relationship to meals. For example, it has been reported that the gastrocolic reflex is more pronounced, and more sustained in IBS patients than normal controls[17-19]. In addition, an exaggerated 'sensory' component of the gastrocolonic response has also been observed in IBS patients who appear to have a lower threshold for developing sensations of gas, discomfort, and pain when lipid is infused into the duodenum[20].

Mistaking IBS as dyspepsia may be a particular problem in Asia because our patients appear to present frequently with upper abdominal pain and functional dyspepsia-IBS overlap appears to be particularly common. In numerous studies from India, Bangladesh and Singapore, more than half of their patients complained of upper abdominal pain, whereas in western series only about a quarter do so[21]. In a recent study 49% of 2785 IBS patients in India reported epigastric pain[15].

MANAGEMENT OF IBS

The British Society of Gastroenterology's Guidelines on the irritable bowel syndrome: mechanisms and practical management.

This document provides a practical guide to the management of IBS, with particular relevance for primary care[13]. Much of the rest of the recommendations in this paper that pertains to the investigation and treatment of IBS, has been selected from this document. The authors recognize that there are differences between primary and secondary care settings, such as "greater familiarity with the patient, and their previous consultations and behaviours, enable current complaints to be seen in context rather than in isolation." Thus, the primary care physician is in a position to take note of features beyond the gut, and as such, can adopt a more holistic approach. It is important that the GP is aware of that IBS is commonly associated non-gastrointestinal symptoms such as lethargy, backache, headache, urinary symptoms and dyspareunia. Failure to do so, "can result in patients being referred to other specialties, where they may receive inappropriate investigation or even treatment."

Helpful diagnostic behavioural features of irritable bowel syndrome in general practice:

- Symptoms present for more than 6 months
- Frequent consultations for non-gastrointestinal symptoms
- Previous medically unexplained symptoms
- Patient reports that stress aggravates symptoms

INVESTIGATIONS

Initial laboratory investigations

"The concept that IBS is a diagnosis of exclusion is no longer tenable and in a straightforward case of IBS in a young person, investigations—particularly those involving irradiation— should be kept to a minimum. The yield in those with established IBS is low but not zero. The patients should be warned therefore from the outset that investigations are likely to be normal, thus avoiding the possibility that negative results will lead to the demand for ever more invasive and unnecessary tests. A full blood count (FBC) should be ordered in all older patients at first presentation, and an FBC plus erythrocyte sedimentation rate (ESR) and C reactive protein in all those with recent onset D-IBS. It should be emphasised that this section deals with IBS and not painless diarrhoea, for which there are separate guidelines."

Second level investigations including endoscopy and imaging

"Patients with IBS-D tend to require more in the way of investigation than IBS-C, because of the overlap with other diarrhoeal diseases." Microscopic colitis now accounts for 20% of unexplained diarrhoea in the over 70s age group in countries where colonoscopy is freely available.[278] "Adult acquired lactose intolerance can cause IBS-type symptoms. A simple screen for this is to ask the patient to undertake a "milk challenge" of one pint of skimmed milk which contains approximately 25 g of lactose. If no symptoms result then lactose intolerance is unlikely. A positive result should be followed by objective confirmation." "Constant upper abdominal pain, particularly if it radiates to the back, should lead one to consider pancreatic disease, best investigated by means of abdominal spiral computed tomography."

Differential diagnosis of diarrhoea predominant irritable bowel syndrome

- Microscopic colitis
- Coeliac disease
- Giardiasis
- Lactose malabsorption
- Tropical sprue
- Small bowel bacterial overgrowth
- Bile salt malabsorption
- Colon cancer

Investigations in primary care

"A full blood count should be ordered in all older patients at first presentation and an FBC and ESR/CRP in all those with new IBS-D. Faecal occult blood testing cannot be recommended as it lacks the required sensitivity and specificity."

When to refer

"Patients with alarm features, those in whom there is genuine uncertainty about the diagnosis, and those whose concerns have not been successfully allayed in their consultations with the GP should be referred for a specialist opinion."

Alarm features in irritable bowel syndrome

- Age >50 years
- Short history of symptoms
- Documented weight loss
- Nocturnal symptoms
- Male sex
- Family history of colon cancer
- Anaemia
- Rectal bleeding
- Recent antibiotic use

TREATMENT OF IBS

The ANMA Asian Consensus on IBS recommends the following approach to managing IBS. The aims of IBS treatment are symptom relief and improvement in quality of life. A good doctor-patient relationship is important in the management of IBS. Physicians should try to identify the contributing factors and address the patient's concerns. Management of IBS should be individualized and target all bothersome symptoms, IBS subtypes, severity of symptoms and contributing factors including psycho-social issues.

The following selected recommendations pertaining to the treatment of IBS, and the strength of the supporting evidence, are derived from the BSG guidelines on IBS[13].

Summary of recommendations for the dietary treatment of IBS

Intervention	Quality of evidence	Benefit/harm	Strength of recommendation
Detailed dietary history to identify potential food intolerance	Very low	Net benefit	Qualified
Assess dietary fibre intake to consider an increase or decrease accordingly	Low	Net benefit	Qualified
Trial of wheat bran or lactose exclusion	Low	Trade-offs	Qualified
Exclusion diet to identify intolerances	Low	Trade-offs	Qualified

Adapted from ref Spiller 2007.

Suggested sequence of pharmacological treatment for IBS

Predominant symptom	First line	Second line
Abdominal pain	Antispasmodic agents	Tricyclic antidepressants
Diarrhoea	Loperamide	5HT3 antagonist
Constipation	Ispaghula	5HT4 agonist
Bloating with distension	Diet, polyethylene glycols	Probiotics, 5HT4 agonist
Bloating without distension	Antispasmodic agents	Probiotics, TCAs

Adapted from ref Spiller 2007

Summary of recommendations for pharmacological treatment of irritable bowel syndrome

Intervention	Quality of evidence	Benefit/harm	Strength of recommendation	Comments
Antispasmodics				
Mebeverine	Low	Net benefit	Qualified	
Alverine citrate	Very low	Uncertain trade-offs	Definitive	
Dicyclomine	Very low	Uncertain trade-offs	Definitive	
Fibre supplements				
Ispaghula	High	Net benefit	Definitive	
Bran	High	No net benefit	Definitive	Half are made worse
Opioids				
Loperamide	High	Net benefit	Definitive	Helps diarrhea, but less effect on pain/discomfort
Tricyclic antidepressants				
Desipramine	Moderate	Trade-offs	Qualified	Ineffective on intention to treat analysis Poorly tolerated at full dose
Amitriptyline, Nortriptyline	Low	Trade-offs	Qualified	Poorly tolerated at full dose
SSRIs				Better tolerated than TCAs
Paroxetine	High	Net benefit	Qualified	Global benefit without benefit to specific bowel symptoms
Fluoxetine	High	Net benefit	Qualified	Global benefit
5HT^4 agonists				Prokinetic
Tegaserod	High	Net benefit	Definitive	Benefit IBS-C, NNT=14
5HT^3 antagonists				Antidiarrhoeal;
Alosetron	High	Trade-offs	Definitive	Benefit IBS-D, NNT=7, ischaemic colitis 1/700
Probiotics	Moderate	Trade-offs	Qualified	
Antibiotics	Low	Trade-offs	Qualified	Controversial, needs replicating

Adapted from ref Spiller 2007.

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LEARNING POINTS

- **The irritable bowel syndrome (IBS) is a condition characterised by abdominal pain, bloating or other discomfort occurring in association with disturbed bowel movement in the absence of major structural or organic cause that can be detected by routine medical tests.**
- **The first widely recognized set of criteria was the Manning Criteria. Since 1994 the Rome Criteria has been developed largely by US and European researchers. Presently the Rome criteria are employed primarily for research.**
- **At the primary care level, use of a screening algorithm comprising symptom criteria, a checklist of alarm features and guidelines on monitoring procedure, is recommended**
- **The aims of IBS treatment are symptom relief and improvement in quality of life. A good doctor-patient relationship is important in the management of IBS.**
- **Physicians should try to identify the contributing factors and address the patient's concerns.**
- **Management of IBS should be individualized and target all bothersome symptoms, IBS subtypes, severity of symptoms and contributing factors including psycho-social issues.**