Irritable bowel syndrome (IBS) is one of the commonest reasons for a consultation. However, because the disorder is poorly understood, many doctors find patients with IBS difficult to treat. Although extra time and effort may be needed, successful management is rewarding because it can substantially improve quality of life. Furthermore, as the British Society of Gastroenterology guidelines1 show, advances in understanding are leading to more effective treatments.

To aid diagnosis and allow international comparisons, several international consensus meetings have culminated in the production of the Rome III diagnostic criteria for IBS (panel 1).2 IBS occurs worldwide, with a similar incidence in Europe and the USA, and is increasingly recognised in developing countries. Under the Rome criteria, IBS affects around 5–10% of the population in both developed and developing countries.

Abnormalities of gastrointestinal sensation, motility, autonomic function, bacterial flora, the mucosal immune system, and serotonin pathways have been described as mechanisms of the disease.3 Hypersensitivity to visceral sensation is common and appears to be partly caused by failed antinociceptive pathways.4 Numbers of and secretions from mast cells are increased in IBS. Raised concentrations of serotonin-containing enteroendocrine cells developing after infectious gastroenteritis have also been reported in patients with IBS.4 The serotonin transporter may be impaired in IBS, but this finding is contentious.5

Patients who present with IBS are typically female aged 20–40 years. Most patients have abdominal pain or discomfort intermittently, with flares lasting 2–4 days.6 Other symptoms include bloating, abnormal stool frequency, and abnormal defecation. Patients can be subdivided according to stool consistency7 into: (1) IBS with constipation, in which patients have hard stools more than 25% of the time and loose stools less than 25% of the time; (2) IBS with diarrhoea, with loose stools more than 25% of the time and hard stools less than 25% of the time; and (3) IBS-mixed, with both hard and soft stools more than 25% of the time. About a third of patients change their bowel habit from one subtype to another over months or years, and these patients are now termed “alternators”. Many patients correctly believe that their symptoms are aggravated by meals and around a third also have functional dyspepsia.

Patients with IBS often have several non-gastrointestinal somatic symptoms, so most experienced clinicians use a holistic approach to diagnosis, taking note of features beyond the gut such as consulting behaviour, previous history of medically unexplained symptoms, lethargy, backache, headache, urinary symptoms, and dyspareunia.7 It is important to recognise these features as part of IBS and to avoid fragmenting care by referring patients to several different specialties.

IBS is associated with psychological distress. Around 50% of IBS patients who seek medical care are depressed or anxious;7 however, many patients put up with their symptoms without consulting a physician. Somatisation, which is a feature of some IBS patients, is most easily recognised with the personal health questionnaire 15, which documents multiple somatic complaints and should avoid endless and futile investigations by indicating that the problem is one of generalised abnormal pain perception.

On examination, most patients with IBS appear anxious, although general examination is usually normal. There may be poorly localised abdominal tenderness to palpation. The most useful findings are those which indicate another cause for abdominal pain. Thus point tenderness, exacerbated by tensing the abdominal wall muscles, suggests abdominal wall pain, whereas pain on palpation of extra-abdominal trigger points might suggest fibromyalgia. Pain reproduced on spinal movements suggests spinal disc disease or osteoarthritis.
IBS patients have substantially increased health-care costs.8 IBS patients consult with their primary-care physician twice as often as non-IBS patients and a third of patients are referred to secondary care. Undiagnosed IBS patients might be referred to inappropriate specialties, which can result in unnecessary surgery, including hysterectomy and cholecystectomy.9

Symptoms of IBS, although variable, usually last many years, with 55% of patients still symptomatic 7 years after diagnosis.10 An IBS diagnosis rarely needs to be revised11 and there is no evidence that IBS leads to more serious gastrointestinal diseases.

The alarm features shown in panel 2 should alert the physician to the fact that IBS might not be the correct diagnosis. In such situations, further investigations are needed.12 A symptom-based diagnosis can be safely made in cases meeting Rome II IBS criteria in the absence of alarm features or abnormal physical examination; further investigations are unlikely to detect any abnormality.12

Most IBS patients require reassurance, explanation, and lifestyle advice. Panel 3 lists management recommendations. Ascertaining a patient’s concerns and relevant psychosocial factors requires time but reduces repeat consultations. A confident diagnosis can be made in most cases at the first consultation. Because more than 50% of patients believe they have serious disease, reassurance that this is most unlikely is important. An explanatory model of gut function and sensation adapted to the patient’s level of understanding is helpful in allaying unnecessary fears.

Typical IBS cases with constipation without alarm features and normal physical examination require no further tests. However, if diarrhoea is present, tests to exclude inflammation and malabsorption are indicated. Investigations include a full blood count, erythrocyte sedimentation rate or C-reactive protein concentration, and serological tests for coeliac disease, which are positive in 3–5% of IBS patients in the UK.14 If further tests are done the doctor should explain that they are likely to be normal.

The role of dietary modification in treatment is uncertain but most patients will have already unsuccessfully tried dietary modification. A systematic exclusion diet helped around half the patients in an uncontrolled trial15 but how much of this was placebo response is unclear. Wheat and dairy products were the commonest culprits identified. Lactose malabsorption is worth considering in IBS with diarrhoea—particularly if the patient is not from northern European racial groups—but only if the equivalent of more than 240 mL milk is consumed daily.

Patients who believe stress is an important factor contributing to their symptoms might be suitable for psychological treatments. Randomised trials show improved coping after psychological treatment, although often without much change in bowel symptoms. Hypnosis has also been beneficial in randomised trials, including in the long term,16 however, limited availability is a major drawback.

Although drug therapy is the preferred intervention by both doctors and patients, true drug effects in most

### Panel 2: Alarm indicators that should be excluded before diagnosing IBS

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

### Panel 3: Management recommendations for IBS

#### Determine concerns and explain symptoms

**Diet**
- Discuss diet and correct any obvious excesses
- Consider trial of wheat or dairy exclusion

**Psychological treatments**
- Anxiety or depression, or both, should be treated
- Cognitive behavioural therapy and psychodynamic interpersonal therapy improves coping
- Hypnotherapy may have long-lasting benefit (often limited availability)

**Drug therapy (subtypes aid targeting therapy)**
- Antispasmodics might improve pain
- Soluble fibres improve pain and bowel habit
- Serotonin type 3 (5HT₃) antagonists improve global symptoms, diarrhoea, and pain
- 5HT₂ agonists improve global symptoms, constipation, and bloating
- Selective serotonin-reuptake inhibitors improve global symptoms without altering bowel symptoms
- Tricyclic antidepressants might benefit pain especially in those with diarrhoea
Comment

randomised trials (10–15%) are smaller than the placebo effect (40–50%). Good consultation style should maximise this placebo effect. Older drugs have not had the rigorous evaluation required of newer agents and their true value is uncertain. However, when pain predominates, antispasmodics are probably the first choice with few side-effects. Soluble fibre (ispaghula, sterculia) would be a good first choice for those with constipation or IBS-mixed. If diarrhoea and particularly urgency dominate, loperamide is useful to reduce bowel frequency but does not help pain. The serotonin type 3 (5HT₃) antagonist alosetron benefits female IBS patients with diarrhoea, improving stool form and improving global symptoms with a number needed to treat (NNT) of 7 (95% CI 5–9). However, alosetron is not available in the UK nor is the 5HT₃ partial agonist tegaserod, which benefits some women with IBS with constipation (NNT 14, 10–33). Use of tegaserod has recently been restricting owing to concerns about an apparent small excess of myocardial ischaemia and stroke (13 events/11 614 patients treated). Much of the data for tricyclic antidepressants are old and of uncertain value. A well-designed adequately powered study showed no benefit on an intention to treat analysis, probably because compliance was so poor. However, there was a substantial benefit in those who had drug detectable in their blood, with an NNT of 4. This study suggested that those with diarrhoea showed the greatest improvement in a composite symptom score and many practitioners use tricyclics, particularly amitriptyline for patients with IBS with diarrhoea, though usually at low doses which are better tolerated. Experience of treatment with selective serotonin-reuptake inhibitors is currently limited, but the NNT in one small study was 3 for global improvement with no significant effect on bowel symptoms. There remains a substantial unmet need for more effective remedies for IBS.

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I declare that I have no conflict of interest.