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CLINICAL REVIEW

Psychological approach to managing irritable bowel syndrome

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> "It is more important to know what sort of person has a disease than to know what sort of disease a person has." *Hippocrates*

The medical management of patients with irritable bowel syndrome is often unsatisfactory. Doctors are still taught that irritable bowel syndrome is a diagnosis of exclusion, and patients readily sense that they are being told that nothing is really wrong with them. Many people soon come to appreciate that the range of medical treatments available is limited in both scope and efficacy. The mood of negativity, once established, is difficult to dispel.

Current medical treatment includes drugs that alter intestinal motility—such as antispasmodics, 5-hydroxytryptamine antagonists, antidiarrhoeals, and laxatives—and dietary changes, including fibre supplementation and identification of food intolerances.[1] Response may vary, but the failure rate of these "physical" treatments is high, which may lead to the conclusion that irritable bowel syndrome has a strong psychological component. A diagnosis of exclusion has been made—again with negative, rather than positive therapeutic, connotations.

Although many doctors are aware that antidepressants have been used in irritable bowel syndrome, they seem reluctant to prescribe such agents, not least because suggesting this as a valid option to patients who are clearly not depressed can be difficult. Moreover, other treatments exist that might be classified as "psychological" to varying degrees. Patients with irritable bowel syndrome should be made aware of the existence of these treatments so that they can make informed choices. Specifically, they should be made aware that using a psychological treatment does not mean that the disease is "all in the mind." This review focuses on psychological treatments for irritable bowel syndrome.

What actually causes irritable bowel syndrome?

Irritable bowel syndrome is best regarded as a complex of symptoms without a single cause. Disordered gut motility, visceral hypersensitivity, intestinal inflammation, and genetic and environmental factors have all been suggested as being causative.[1-3] In some cases, a very well defined point of onset of syndrome symptoms seems to exist, such as after gastrointestinal infection.[2] Although heterogeneity is likely, the most plausible view is that the symptoms of irritable bowel syndrome are an integrated response to a variety of complex interactions combining biological and psychosocial factors.[4 5] This implies that in many cases psychological and social factors contribute to a patient's symptoms. The concept of irritable bowel syndrome as a disorder of brain-gut interaction with physical and psychological components,[4] which places the emphasis on the perception of symptoms and their impact rather than on the symptoms themselves, is a useful one when selecting treatment strategies.

What is the impact of psychology on irritable bowel syndrome?

The psychological profiles of patients presenting to a doctor with irritable bowel syndrome are well characterised, and up to half have been found to have a demonstrable psychiatric disorder if assessed by research criteria.[5] Whether these abnormalities are cause or effect is debated,[6] but whatever their relevance, it may well be inappropriate for the clinician to conclude that perceived psychological factors in individual patients are the cause of their symptoms. When interpreting results of the myriad studies, we also need to appreciate that the quoted frequencies of psychological abnormalities are limited to those patients with irritable bowel syndrome who have actually presented to a doctor. Many patients with irritable bowel syndrome have never consulted a doctor. This indicates that the psychopathology associated with irritable bowel syndrome may be of two types: that which is a characteristic of the illness itself and that which causes the patient to seek medical advice.[5 6]

Whatever the clinical implications of these observations, patients with irritable bowel syndrome are clearly more likely to have depression and "abnormal"

behaviour patterns, including anxiety, sensitivity, and somatisation. More specifically, some patients develop maladaptive behaviour regarding eating and defecation, which reinforces the magnitude of symptoms and their impact on quality of life.[7 8] Moreover, concurrent psychiatric disorders are associated with poor outcome in irritable bowel syndrome.[w1] An appreciation of this should lead the clinician to identify patients for "psychological" treatment as, if started at an early stage in presentation, the outcome of such treatment is favourable.[6]

How and why should I make a positive diagnosis?

To avoid the initial pitfall of engendering a negative attitude by reaching a diagnosis by exclusion, diagnostic criteria have been devised to enable a confident clinical diagnosis of irritable bowel syndrome to be made from the history alone. Although these criteria were introduced to allow standardisation of diagnosis for research studies, they can be readily used in a clinical setting by any practitioner (see example in box 1). These are used only as a basis for diagnosis, taking into account the absence of "alarm" symptoms and the general characteristics of the presenting patient. That a positive, reassuring diagnosis can be therapeutic right from the time of the first consultation has certainly been suggested.[w2]

What are the options for psychological management?

Antidepressants

A growing body of evidence supports the use of antidepressants for irritable bowel syndrome, but the mechanism of action of these drugs in the disorder remains unclear. Their beneficial effect is independent of mood or anticholinergic effects on the gut,[9 10] which can be important in encouraging patients to accept their use. Clearly, although their antidepressant action is likely to be important in patients with a coexisting depressive disorder, a separate and key action may be to influence psychological pathways leading to reduced somatisation and a reduced tendency to regard gut sensations as indicating illness.[9]

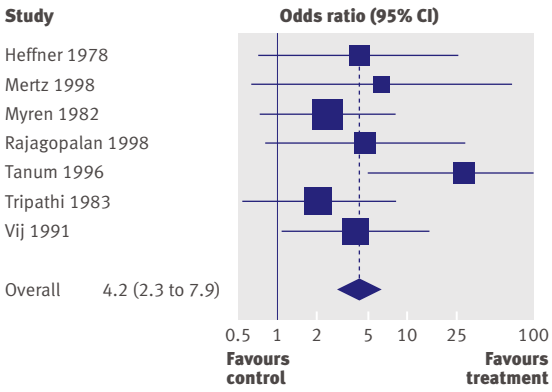

Fig 1 | Effect of tricyclic antidepressants on "overall symptom improvement with therapy." Trials included used a validated pain scale to quantify improvement (reproduced with kind permission)[11]

Tricyclic antidepressants

In general, studies of tricyclic antidepressants in irritable bowel syndrome are poorly designed by current standards, not least because they were completed two or three decades ago. With this caveat, a meta-analysis of tricyclic antidepressants found an odds ratio for improvement of 4.2 (95% confidence interval 2.3 to 7.9) with a number needed to treat of 3.2 (2.1 to 6.5).[11] Figures 1 and 2 summarise the results of this meta-analysis.

Tricyclic antidepressants seem to be of more benefit when the main symptoms are pain and diarrhoea. As might be expected from anticholinergic side effects, constipation does not improve.[w3] With

Selected trials of cognitive behaviour therapy (CBT) in irritable bowel syndrome (IBS)

Trial	Design and numbers	Intervention	Outcome
Bennett and Wilkinson[w12]	RCT; 12 CBT, 12 usual care	Eight week package: stress management training, cognitive therapy, and contingency management *v* medical treatment (aperients and antispasmodics)	Anxiety reduced in treatment group but not in control group; both achieved improvement in IBS symptoms, restriction of activities, and fatigue
Lynch and Zamble[w13]	RCT; 12 CBT, 12 waiting list	Coping skills, assertiveness training, education, and progressive relaxation *v* waiting list controls	Significantly greater improvement of IBS symptoms and anxiety in treatment group
Greene and Blanchard[w14]	RCT; 10 CBT, 10 symptom monitoring	Individualised CBT for 10 sessions *v* daily gastrointestinal symptom monitoring over eight weeks	80% of treatment group showed clinical improvement compared with 10% of controls. Sustained results at three month follow-up
Guthrie et al[w15]	RCT; n=102	Psychotherapy *v* "supportive listening," 12 week study. After study, 33 patients from control group accepted psychotherapy	Psychotherapy significantly superior in terms of physical and psychological symptoms (for women; trend in men). Results sustained at 12 month follow-up
Boyce et al[w16]	RCT; n=105	Three arm trial: all groups received standard care, plus either CBT or relaxation training.Patients with "resistant IBS" not included	Significant improvements for all groups in IBS symptoms, physical/social functioning and general wellbeing, but no significant differences between groups. No difference at 12 month follow-up

RCT=randomised controlled trial.

Sources and selection criteria

We did a Medline search for the terms "irritable bowel", "psychology", "cognitive therapy", and "hypnotherapy" in various combinations. We scrutinised the articles provided by this search, selecting high quality journal reviews, meta-analyses, and Cochrane reviews. We examined citation lists from these for further relevant articles. BHH also drew from a personal archive of references from known leaders in this field. Where possible, we present only data from randomised controlled trials or meta-analyses

conventional doses of tricyclic antidepressants, rates of adverse events are potentially high; up to 40% of patients discontinue or change drugs as a result of intolerance.[w4] Evidence suggests that low dose tricyclic antidepressants (for example, daily doses of amitriptyline as low as 10 mg[w5]) are as efficacious as, and produce fewer side effects than, conventional doses.[11 12]

Selective serotonin reuptake inhibitors

Selective serotonin reuptake inhibitors have fewer side effects than tricyclic antidepressants, which makes their use particularly attractive in patients with irritable bowel syndrome. Moreover, selective serotonin reuptake inhibitors are particularly thought to help with constipation and pain or bloating symptoms (as they accelerate oro-caecal transit and influence colonic sensorimotor responses[w6-w8]). Several randomised controlled trials have provided encouraging, if not robust, results on this (although relatively fewer trials have been done than with tricyclic antidepressants).

In a study that assessed the symptomatic response to rectal distension, fluoxetine did not significantly affect the threshold for discomfort in patients with irritable bowel syndrome compared with placebo.[w9] In those patients with hypersensitivity to rectal distension, abdominal pain improved but bowel habit, global symptom relief, and psychological symptoms were unaffected.

Paroxetine improved overall wellbeing in patients with irritable bowel syndrome compared with placebo,[w10] as well as improving related anxiety. These benefits were found even in non-depressed patients.[w10] However, abdominal pain, bloating, and social functioning were not improved. A study of paroxetine and psychotherapy in combination found that patients with a reported history of sexual abuse responded particularly well,[w11] perhaps owing to the tendency to somatisation in this subgroup (as well as patients with coexisting depression).[9]

Citalopram was effective in reducing abdominal pain compared with placebo in 23 patients with irritable bowel syndrome over a six week trial period.[13] The benefit was independent of mood; although this trial has been criticised,[10] it remains the only randomised controlled trial to show benefit for a selective serotonin reuptake inhibitor in reducing the actual symptoms of irritable bowel syndrome rather than overall wellbeing or symptoms in a select subset of patients.

Cognitive behaviour therapy

Cognitive behaviour therapy shows patients how events, thoughts, emotions, actions, and physiological responses are interlinked; the perception of sensation and the patients' thoughts are of particular importance. It is a "short-term intervention oriented towards change, rather than insight for its own sake, and particularly towards the development of new strategies and skills for coping with problems."[14]

Most strategies involving cognitive behaviour therapy share the features of exploring and attempting to modify the impact of cognition and behavioural patterns on bowel symptoms and psychosocial distress.[14] Comparing data from trials of cognitive behaviour therapy for irritable bowel syndrome is difficult, as methods are heterogeneous.[15] In practice, patients' reaction to their symptoms may be more important than the symptoms themselves.[14 15]

The results of several randomised controlled trials support the use of cognitive behaviour therapy for irritable bowel syndrome at an individual level (table),[w12-w16] as well as larger studies of a group based approach.[w17 w18] A recent meta-analysis of the efficacy of cognitive behaviour therapy (50% reduction of symptoms) gave an odds ratio of 12 (95% confidence interval 5.56 to 25.96) in favour of cognitive behaviour therapy, with a number needed to treat of 2.[16]

Cognitive behaviour therapy is most appropriate for those patients who are considerably distressed by their symptoms, are open to the idea that psychological factors play some role in their difficulties, and are willing to participate in this therapeutic approach.[14] Outcomes may be poorer in women, patients with a diagnosed psychiatric disorder,[w19] those with high anxiety, and those with symptoms on a daily basis.[w20] In contrast, patients with a reported history of sexual abuse may respond favourably.[w21]

Cognitive behaviour therapy is as effective as antidepressant treatment,[17] and its benefits last longer.[18] Combining cognitive behaviour therapy and antidepressants can produce the best response.[19]

Box 1 | Rome III criteria* for diagnosing irritable bowel syndrome[4]

- Symptoms of abdominal discomfort or pain, for three days a month in the past three months, associated with two or more of the following three features:
- Relieved by defecation
- Onset associated with a change in frequency of stool
- Onset associated with a change in consistency (form or appearance) of stool

*Criteria fulfilled for the past three months, with onset of symptoms at least six months before diagnosis

Tackling psychosocial factors is increasingly recognised as an important part of the management of irritable bowel syndrome.[20 21] Although it requires a considerable investment in time and resources, cognitive behaviour therapy has been effective in a primary care setting and deserves to be more widely available.[22 w22] Recent initiatives to produce more community led and patient led services may provide just such an opportunity for primary care physicians to be able to commission these services.[23]

Hypnotherapy

The use of non-drug treatments for irritable bowel syndrome is popular with patients who are disappointed by their lack of response to standard drug treatment or concerned about its potential side effects.[w23] Gut directed hypnotherapy has been reported to be an effective intervention for irritable bowel syndrome in small trials.[w24 w25] This approach involves induction of a hypnotic state by using a variety of techniques, including progressive relaxation, to create images related to symptom control and normalisation of gut function (box 2).[24]

A recent systematic review summarised 18 trials of hypnotherapy for irritable bowel syndrome and concluded that, although 10 showed a beneficial effect, insufficient evidence existed to recommend widespread use of hypnotherapy. The review concluded that this treatment option should be restricted to specialist centres dealing with more severe cases of the syndrome.[25] Nevertheless, hypnotherapy has the potential to help those patients whose irritable bowel syndrome is severe and has been shown to be particularly effective within a specialist programme of care.[26]

Box 2 | Gut directed hypnotherapy[24]

This technique has been reported to be effective in irritable bowel syndrome in several small trials

It is probably best used in specialist centres, within a multidisciplinary programme of care

The technique is mechanistically well placed within the current model of brain-gut interactions that underpin irritable bowel syndrome, with an emphasis on developing an "internal locus of control"

Observed benefits are beyond perihypnotic, relaxation induced autonomic changes

Patients are usually seen for an initial consultation to obtain a full history and to explain the technique, which usually involves 12 weekly sessions of 45-60 minutes each

Hypnotic induction with progressive relaxation is used as the basis for "suggestion"

Initially, suggestions based on improving confidence and general wellbeing may be used, as relevant to each individual patient

Subsequent sessions then focus on imagery and techniques aimed at normalising gut function. For example, patients place their hands on their abdomen, inducing a sense of warmth and comfort; or imagery is used to symbolise the gut, which is then altered accordingly to represent normal function (a commonly used image for patients with diarrhoea predominant symptoms is one of the bowel as a fast flowing river that is then imagined to be flowing slowly and smoothly)

Audio tapes are also provided from each session for autohypnosis according to patients' capabilities and understanding

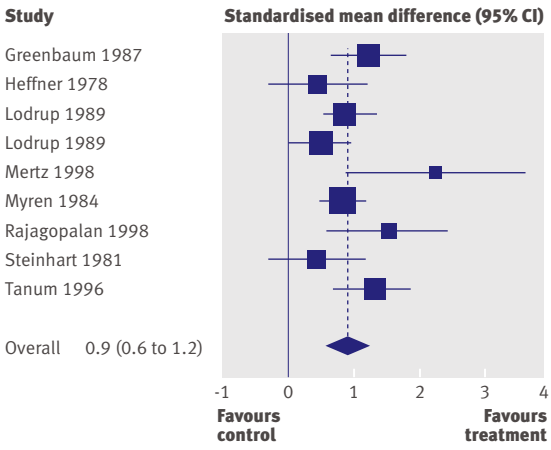

Fig 2 | Effect of tricyclic antidepressants on abdominal pain scores (reproduced with kind permission)[11]

How should I approach the patient with irritable bowel syndrome?

Doctors need to avoid making the diagnosis of irritable bowel syndrome in a manner that leads patients to believe that nothing is wrong with them or that their symptoms are being ignored, downplayed, or misunderstood.[w2] Making a positive diagnosis of irritable bowel syndrome on the history alone should be possible, guided if necessary by validated diagnostic criteria (table).[4]

Investigations should be done as appropriate,[1] but a useful approach may be to let the patient know that you are expecting the results to be normal (with the above in mind). Unless the patient raises the matter, psychological factors need not be explored before a confident diagnosis has been made.

An explanation of the currently favoured theory of the genesis of irritable bowel syndrome involving the complex interaction of biological and psychological factors,[4] and that the relative contribution of these varies from person to person, is useful. This gives the doctor an entirely legitimate reason for beginning to explore the psychological dimension.

What psychological treatments should I consider?

The selection of treatment should depend on which aspect of the disorder it is to be principally focused on: the physical/physiological or psychological. For example, exploring possible food intolerances or prescribing mebeverine would be pointless if compelling evidence indicates that psychological factors underlie the patient's symptoms.

SUMMARY POINTS

Irritable bowel syndrome is believed to result from a variety of biological and psychosocial factors

Irritable bowel syndrome is not a diagnosis of exclusion; a positive diagnosis can usually be made

The usual medical treatment is often highly unsatisfactory; if psychological factors seem important, these should be dealt with

Tricyclic antidepressants and some selective serotonin reuptake inhibitors are of value in improving symptoms

Cognitive behaviour therapy has a strong evidence base for its effectiveness

Gut directed hypnotherapy is an effective treatment and is especially suitable for more severely affected patients who might be prepared to travel to specialist centres

The choice of psychological treatment will depend on the individual patient. Some may prefer a non-drug approach. They may express, for example, a preference for hypnotherapy, and certainly the success of cognitive behaviour therapy depends on patients' motivation.[14] Selecting the most appropriate drug may depend on the pattern of symptoms (for example, tricyclic antidepressant for diarrhoea predominant symptoms or selective serotonin reuptake inhibitor for constipation predominant symptoms), but compliance will depend on how such treatment is presented to the patient. Medical practice may divide symptoms into the physical and the psychological, but this may not be helpful to the patient who sees himself or herself as a whole. For this reason, patients with irritable bowel syndrome may be most appropriately managed in primary care, involving a specialist only when diagnostic uncertainty exists. Inevitably, the choice of treatment will be limited by local availability. However, irritable bowel syndrome is undeniably very common, and many patients are probably denied help by lack of access to therapists with the appropriate psychological skills. Increasing provision of primary care services for patients with irritable bowel syndrome will provide an avenue for effective and early psychological treatment for a condition in which real improvement can be achieved.

ADDITIONAL EDUCATIONAL RESOURCES

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Hutton J. Cognitive behaviour therapy for irritable bowel syndrome. *Eur J Gastroenterol Hepatol* 2005;17:11-4

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Royal College of Psychiatrists. Cognitive behavioural therapy. www.rcpsych.ac.uk/mentalhealthinformation/therapies/cognitivebehaviouraltherapy.aspx

Cochrane Library (www3.interscience.wiley.com/cgi-bin/mrwhome/106568753/HOME)—Search for reviews on irritable bowel syndrome (and psychological treatments)

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