INTRODUCTION

Although the cause of inflammatory bowel disease (IBD) remains unknown; it appears to involve a complex interaction between patients’ genotype and poorly defined environmental factors. Current evidence points to links between anxiety, depression and psychological stress on the one hand, and IBD on the other. Thus, active IBD is itself inherently stressful; life stresses are associated with anxiety and depression, which are both more common in patients with IBD than in the general population; and psychological stress is now recognized as predisposing to relapse in IBD. Here we review the evidence for these assertions and for the possibility that psychological interventions of various types might improve mood disturbances and disease activity in patients with IBD.

MOOD DISORDERS AND STRESS IN IBD

Although there is no evidence that anxiety, depression or psychological stress, defined as a real or perceived threat to a person’s mental or physical stability, are a primary cause of IBD; stress has long been thought by patients, and reported anecdotally, to increase disease...
The Impact of Counseling and Other Psychological Treatments on IBD

activity in IBD. As a result of the difficulties inherent in designing and executing investigations of the effects of mood and stress on the course of IBD, it has taken a long time to confirm this association (1–4). Such studies require a long study period and a high degree of patient compliance for the collection of diary records of symptoms and life events. There are often confounding changes in medication during the study period. Definitions of psychological disturbance, stress-inducing life events and IBD relapse have varied. Lastly, many studies have been under-powered, and have contained mixed IBD populations. Studies containing mixed IBD populations are hard to interpret for two reasons. First, anxiety, depression and stress, through their physiological effects on gut function, may affect standard IBD symptom scores in ulcerative colitis (UC) and Crohn’s disease (CD) to differing extents, particularly in relation to weighting of scores for diarrhea. Second, it is possible, although unproven, that mood disturbances and stress may affect the inflammatory process in different ways in the two forms of IBD.

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HOW COMMON ARE ANXIETY AND DEPRESSION IN IBD?

A recent review of eight mixed methodology studies indicated that both types of IBD were associated with higher rates and/or increased symptoms of anxiety and depression (5). The same review concluded that the symptoms of both were worse during periods of active bowel disease. In our own study, anxiety and depression were more common in objectively defined active than inactive UC, but this did not hold true in Crohn’s (6).

DO MOOD DISORDERS OR STRESS CAUSE RELAPSE IN IBD?

A number of prospective studies taken together demonstrate an association between psychological disorders and relapse of IBD (1–3). Of 13 longitudinal studies of the course of IBD, nine reported that stress, adverse life events and/or depression worsened disease activity while four reported no effect. All but one of the negative studies unfortunately included a mixed IBD patient sample (7).

HOW MIGHT MOOD DISORDERS CAUSE RELAPSE OF IBD?

The burgeoning research topic of psychoneuroimmunology has indicated some of the humoral and neuronal routes by which mood, acting through the hypothalamus-pituitary-adrenal axis and the autonomic and enteric nervous systems can alter the inflammatory and immune response in the gut (1) (Figure 1). Nerve fibers of the autonomic nervous system form close associations with immunoregulatory cells in gut mucosa and mucosa-associated lymphoid tissue; these cells carry receptors for neurotransmitters and their activation can be modulated, at least in experimental settings, by psychological stress.

PSYCHOLOGICAL TREATMENT IN IBD

Whatever the mechanisms involved prove to be, if mood disorders and stress do have an adverse effect on the natural history of IBD, then measures which reduce them should in theory help not only patients’ psychological symptoms but also the activity of their IBD. Unfortunately, there are again multiple difficulties in designing trials to test this proposal, and the published literature does not provide clear-cut answers.

DIFFICULTIES IN PERFORMING CLINICAL TRIALS OF PSYCHOLOGICAL TREATMENTS IN IBD

First, controlled studies using non-pharmacological psychological interventions are difficult to blind. Existing reports have mostly failed to take into account the importance of individualizing treatments by patients’ age, their stage of adjustment to IBD (8), their personality, and their mood at the time of recruitment. Some studies have used a combination of different psychological modalities for varying lengths of time, sometimes in individual and sometimes in group settings. The term coping describes the thoughts and behaviours used by people to manage the internal and external demands of situations that are perceived as taxing; an individual’s ability to deal with stress depends both on their coping resources and the strategies they employ when stressed (9). No studies to date have focused on patients’ coping methods. As in studies of the influence of mood and stress on IBD, clinical trials to date have often been compromised by a lack of objective definition of IBD activity (for example with blood tests such as C-reactive protein, fecal calprotectin or endoscopy), relying instead on symptom scores which can themselves be altered by the treatment under investigation. Several trial interventions have been applied to groups of patients with IBD of both types and of varying disease activity; in some instances base-line disease activity has been poorly defined. Given their design limitations, it is not surprising that published studies are sometimes hard to interpret.

WHAT PSYCHOLOGICAL TREATMENTS HAVE BEEN ASSESSED IN IBD?

A wide range of psychological approaches has been formally assessed in patients with IBD; these include:

- Psychodynamic psychotherapy
- Cognitive behavioral therapy
- IBD-specific education
- Anti-depressants
- Hypnotherapy
- Social support groups
Psychotherapy

Psychotherapy is an interpersonal relational intervention between patient and therapist which employs a range of techniques: those assessed in patients with IBD include psychodynamic psychotherapy and cognitive behavioral therapy (CBT).

Psychodynamic Psychotherapy

Psychodynamic psychotherapy involves a therapeutic approach which assumes that dysfunctional or unwanted behavior is caused by unconscious internal conflicts; it focuses on gaining insight into these motivations based on Freudian psychoanalysis. Disappointingly few studies have been adequately designed to assess the impact of this type of psychotherapy on the course of IBD. The single controlled study which included endoscopic assessment in patients with UC was confounded by poor matching of the treated and control groups with respect to psychological status. The remainder of the reports were compromised by the inclusion of mixed IBD populations, and a reliance on symptom scores as IBD outcome measures (7). With these caveats, psychodynamic psychotherapy has not been shown unequivocally to improve the course of IBD or indeed patients’ psychological status.

Cognitive Behavioral Therapy (CBT)

Cognitive behavioral therapies focusing on stress reduction include supportive counseling and disease education, training in coping strategies and progressive muscle relaxation. As CBT has multiple components, it is not possible to dissect out which aspect is beneficial in any particular trial context.

The results of trials of the effects of CBT in ameliorating IBD have been unimpressive. Of seven longitudinal studies evaluating its effect, discernible improvements in IBD activity were seen in two, with equivocal results in one. CBT did however, positively influence patients’ psychological state, improving depression, health-related quality of life and their ability to cope in five trials (7).

More recently, a retrospective study of individualized disease-specific IBD counseling, using CBT and solution-focused therapy, showed improvement not only in patients’ psychological well-being and stress resolution but also in the activity of their IBD, as indicated by reductions in relapse rate, in use of steroids and other medications, and in outpatient attendances during the year after it was started, compared with matched controls (10).

Disease-specific Education

Intrinsic to the forms of psychotherapy outlined above is disease-specific education. The results of four prospective studies designed to evaluate the clinical effect of education in IBD are disappointing. They suggest that it has little effect on psychological status or IBD course, although it may reduce healthcare utilization and increase patient satisfaction (7).

Anti-depressants

The effects of psychoactive drugs on disease activity in IBD have not yet been properly evaluated. Anti-depressants are probably the most widely used treatment for depression but they are successful in relieving psychological symptoms in only about 30% of patients (11). A small open label study of paroxetine in eight patients with IBD and major depression, reported improvements in depression and social disability scores but, not in IBD activity (12). More recently, a preliminary report of a randomized placebo-controlled trial of imipramine 10–50 mg/day for eight weeks in 50 patients with mild to moderately active UC claimed to show that the antidepressant improved disease activity. Unfortunately, however, patients were randomized regardless of their mood status. Imipramine is likely to have improved the colitis score used through a direct constipating effect and details of sigmoidoscopic or laboratory measures of disease activity were not reported (13). Well-designed trials of antidepressants in IBD are clearly needed.

Hypnotherapy

Hypnotherapy is a technique by which the practitioner induces a temporary trance-like state. Hypnosis has been shown in controlled studies to be effective in patients with irritable bowel syndrome (14). However, in IBD, there are only very limited reports of the effects
of hypnotherapy (15–17) and, as with antidepressants, well-designed controlled studies are required.

**Social Support/Patient Groups**

Despite being unproven as a way of improving coping strategies and disease course; a supportive relationship between patients, whether in groups or as individuals, and their IBD team is likely to be important, as may be links with patient bodies such as the Crohn’s and Colitis Foundation of America (CCFA). In the latter context, a one week IBD summer camp sponsored by CCFA in children and adolescents with IBD, reportedly improved health-related quality of life although not anxiety scores (18).

**CONCLUSIONS**

Taken together, these studies suggest that a proportion of patients with IBD benefit in relation to health-related quality of life and mood disorders from a cognitive behavioral approach. Psychoanalysis and disease-specific education alone have little if any effect. Although the effects of these interventions in ameliorating IBD have been limited, this could reflect both the "one-size fits all approach" necessary for these interventions in randomized controlled trial design, and the difficulties with trial methodology referred to above.

Despite the limitations of existing evidence, a third of patients with IBD studied using the ADAPT questionnaire, (Assessment of the Demand for Additional Psychological Treatment) wanted psychological support (19). At the same time as optimizing conventional treatment of their IBD; gastroenterologists should look out for psychological stress and mood disorders and offer prompt referral of their patients to colleagues with expertise in the management of psychological disorders, even if most such approaches have not yet been shown to reduce IBD activity. Further well-designed controlled trials are urgently needed to define which of the wide range of potential psychological treatments is most effective in patients with IBD.

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**References**


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