In medicine, one of a range of disorders that include Crohn's disease and ulcerative colitis. Dietary supplements to replace lost nutrients are necessary for patients with inflammatory bowel diseases.

Inflammatory bowel disease (IBD) refers to two disorders: Crohn's disease and ulcerative colitis. Both are remitting diseases, with alternating periods of exacerbation and remission with symptoms of pain, diarrhoea and anorexia. Ulcerative colitis usually affects the large colon and results from inflammation of its inner lining. Crohn's disease results from an inflammation of the entire thickness of the intestinal wall, and may occur anywhere in the gastrointestinal tract, although it most frequently occurs in the small intestine. Complications of both disorders include the development of fistulas and scarring which may lead to obstruction and distension and, potentially fatal, rupture of the bowel. Both are thought to result from immune dysfunction and carry a high risk for the development of cancer (see ‘Cancer: digestive tract’).

**Aetiology and impact**

Initial aetiological theories suggested both ulcerative colitis and Crohn's disease to be psychosomatic in origin (see ‘Psychosomatics’). Early analytical work by Alexander provided clinical evidence of this relationship, while a number of uncontrolled studies found a high percentage of IBD patients to report adverse life events prior to symptom exacerbation. However, controlled studies have shown little consistent evidence that IBD patients experience more stress preceding exacerbation than is typically encountered by healthy controls. Indeed, Von Wietersheim *et al.* (1992) found the number of life events reported in the previous six months by ulcerative colitis patients to be lower than those reported by patients undergoing surgery for minor injuries. However, they listed more feelings of being under pressure.

More pertinent, however, may be studies examining the impact of daily hassles. Duffy *et al.* (1991) followed a large cohort of IBD patients for approximately six months, and found that major life events and daily strains independently prospectively contributed to the variance in both self-reported and medically verified symptoms of IBD. The combined stress and demographic variables explained a total of 47% of the variance in disease activity. In a smaller study involving a more fine-grain analysis, Greene *et al.* (1994) followed 11 patients for a period of one year. A daily diary of stress, coping and mood provided a measure of psychosocial stress and its emotional responses. Pooled time series analysis revealed a prospective effect of stress on the self-reported signs and symptoms of IBD. Daily and monthly stress were positively associated with disease activity.

The symptoms of IBD may also contribute to distress. Porcelli *et al.* (1996), for example, reported prospective data on a large cohort of IBD patients, evaluating the relationship between psychological distress and disease activity. Patients were evaluated at baseline and six-month follow-up, and grouped as ‘unchanged’, ‘improved’ and ‘worsened’. The clinical course of IBD affected the extent of
psychological distress. An improvement in disease activity over time was related to a decrease in the anxiety scores. A worsening in disease activity over time was related to increase in anxiety scores.

**Interventions**

Interventions with IBD patients have been of two types: those targeted primarily at symptom reduction, and those at reducing distress resulting from symptom exacerbation. Unfortunately, few satisfactory studies of either type have been conducted, limiting the conclusions which may be drawn from the research. In one of the first such studies, Karush et al. (1977) allocated IBD patients to either medical treatment alone or in combination with supportive psychotherapy. Over the eight-year period of the study, patients in the combined treatment group experienced shorter and less severe exacerbations and longer periods of remission. However, the study was seriously compromised by non-random allocation to condition and a failure to control for the use of steroids and antibiotics. Subsequently, Milne et al. (1986) reported significant improvements on measures of symptomatology over a follow-up period of one year in patients assigned to a stress management protocol relative to those assigned to a standard treatment control group. No differential changes in medication which may explain these differences occurred. However, patients in the intervention condition reported significantly more symptoms and psychological stress at baseline, and their relative improvement on both types of measure may be attributable to regression to the mean. One final study examined the relationship between stress management and symptoms. Schwarz and Blanchard (1991) reported the only failure of IBD patients to benefit from psychological therapy in comparison to a symptom monitoring condition. Participants in the active condition reported significant reductions in five symptoms following an intervention comprising progressive muscle relaxation, thermal biofeedback and cognitive stress management techniques (see ‘Biofeedback’, ‘Cognitive behaviour therapy’ and ‘Relaxation training’). Over the same period of time, patients in the symptom monitoring group reported decreases in all eight of the symptoms being monitored. When this group subsequently received the intervention, their symptoms increased.

More positively, a number of studies suggest that psychological distress resulting from symptom flare up may be reduced through the use of psychological techniques. Despite the lack of symptomatic change, patients in the active intervention of Schwarz and Blanchard (1991) reported less symptom-related stress, less depression and less anxiety than those in the control group. Mussell et al. (2003) also found a cognitive behavioural group treatment to reduce levels of depression, and disease-related worries and concerns. Finally, Shaw and Ehrlich (1987) found evidence that psychological interventions may help patients cope better with the pain associated with IBD. They allocated 40 patients with IBD to either a relaxation training or attention control condition. Immediately following the intervention and at six-week follow-up, patients in the active intervention reported significantly less frequent and intense pain, and were more able to control their pain. In addition, significantly fewer patients were taking anti-inflammatory drugs (see also ‘Pain management’).

**Conclusions**

There is some evidence of a modest relationship between everyday levels of stress and IBD symptomatology. It is not clear, however, whether psychological interventions can impact on the symptoms of IBD, although there is more evidence that such interventions may help patients cope better with them.

(See also ‘Irritable bowel syndrome’, ‘Gastric and duodenal ulcers’ and ‘Cancer: digestive tract’.)
REFERENCES


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