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Stress Management for Irritable Bowel Syndrome: A Controlled Trial

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Abstract. Thirty-five patients with irritable bowel syndrome were randomised to receive treatment in a stress management programme or conventional therapy which included the antispasmodic Colpermin. The stress management programme involved a median of six 40-min sessions with a physiotherapist during which patients were helped to understand the nature of their symptoms, their relationship to stress and were taught relaxation exercises. Two thirds of those in the stress management programme found the programme effective in relieving symptoms and experienced fewer attacks of less severity. This benefit was maintained for at least 12 months. Few of those given conventional management had any benefit. A stress management programme would appear to be of value for patients with irritable bowel syndrome.

Introduction

Irritable bowel syndrome (IBS) is the most common diagnosis in patients referred to hospital for a gastroenterological opinion [1]. In the UK, it accounts for half of the outpatient referrals in gastroenterology [2] with about 500 new cases each week [3]. The symptoms which include a change in bowel habit and abdominal distension with discomfort are very common in the community although only a minority seek medical advice [4]. Many patients are refractory to conventional management [5], and the clinical workload involved has been given as one of the reasons for the appointment of more gastroenterologists [3]. Part of the diagnostic difficulty is the extent of investigation required to exclude other pathology as a cause of the symptoms which varies greatly between patients and even in the same individual. Some clinicians feel it may be diagnosed with confidence without detailed investigation to exclude organic disease, especially in young patients [5, 6]. Some investigations, however, are usually carried out to reassure both patient and doctor. It is more common in women and often associated with psychological factors, although a psychological approach is rarely used as first line therapy

because it is time consuming, and there are no criteria to identify those who may respond [5, 7]. Conventional management includes a sympathetic medical approach, high fibre diets, bulking agents and antispasmodics; high fibre diets are of particular value in those patients with constipation [5]. In recent years, more attention has been paid to the 'stress factor' with introduction of individual [8] and group [9] hypnotherapy, psychotherapy [10], antidepressants [11] and behavioural therapy [12]; all these approaches have been shown to have an effect. We have examined the value of a 'stress management programme' (SMP) and compared it with a more conventional approach which included use of an antispasmodic agent.

Patients and Methods

Thirty-five patients, 20 women, with a mean age of 44 years, range 22–72 years, entered the study whilst attending a gastroenterology clinic (table 1). The diagnosis was based on typical symptoms of recurrent abdominal pain, flatulence, nausea and change in bowel habit with a normal physical examination; haematological and biochemical measurements, sigmoidoscopy and often barium enema were normal. Symptoms had been present for at least 6 months in all patients, median 19 months, range 6 months to 18 years. Previous treatments had been used by 17 of them and included antispasmodics (11), Fybogel (6), Imodium (4) and various gastric preparations in 5; the antispasmodic preparations included both Colofac in 4 patients and Colpermin in 7. On admission to the trial, none were on specific drug therapy for bowel symptoms, and none had previously tried a psychological approach.

All were given a written account of the IBS, which included information on the role of stress and value of relaxation exercises. They were also given opportunity to discuss their illness. The nature of the study was explained, and patients were invited to take part. After obtaining informed consent, they were randomised to be treated either in the SMP or with the antispasmodic Colpermin, three capsules daily. A simple questionnaire was completed which identified the severity and frequency of abdominal pain, the pattern of defaecation and other common symptoms associated with irritable bowel. Patients were also asked whether their symptoms appeared to be related to stress.

The SMP was developed from previous work by members of our physiotherapy department (M.S. and

Table 1. Clinical details of patient groups

	SMP	Anti-spasmodic
Age, years		
Mean	50	44
Range	22–72	24–63
Sex		
Male	7	5
Female	11	12
Duration of symptoms		
Mean	4 years	3 years
Range	6 months to 16 years	6 months to 17 years
Abdominal pain		
Present	17	17
Absent	1	0
Main symptom	9	9
Distension and/or flatulence		
Present	15	12
Absent (or minor)	3	5
Main symptom	4	4
Change in bowel habit		
Watery or soft > 2/day	10	9
Main symptom	5	4
Constipated < 2–4/week	4	3
Variable	4	5
Recognition of stress	16	11

Clinical details at initial examination of patients with IBS (n = 18) in the SMP and 17 given an antispasmodic. Details of their symptoms are also given together with the number who recognised the relationship between stress and symptoms.

P.S.) to help patients relate abdominal symptoms to personal stress and tensions. They were seen individually each week for 40 min by one of the physiotherapists, all of them on at least four occasions, although arrangements for the number of sessions were flexible. At the initial interview, patients' attitudes were explored about any relationship between symptoms and stress, as well as identifying those areas of stress which appeared of particular relevance. Subsequent sessions were intended to reassure patients by correcting any misconceptions about normal intestinal function and by helping them to understand the cause of common symptoms. They were then taught 'breathing exercises' which were used by the patient to both identify and control tension, with a view to implementing these techniques during ordinary daily living.

During the 6 months of the trial, all patients were seen on at least one occasion in the clinic to review progress and encourage them to continue with treatment. At the end of the trial, patients were again either seen in the clinic or contacted by telephone; complete a questionnaire; they were asked to identi any change in symptoms, particularly those symptoms which had improved most. Their views abo aspects of management which may have contribute to this were also sought. After a further 6 months, months after commencement of the trial, all patient were again telephoned and asked about the curre frequency and severity of their symptoms.

Statistical Methods

Outcome was analysed according to the princip of intention to treat, because though we were able attain follow-up on all patients, compliance was clear. Each outcome variable is presented in table three categories, but each table is collapsed down 2 × 2 in the obvious way. χ^2 tests with 1 degree freedom are used to compare proportions between th groups, and an exact 95% confidence interval is give for each proportion [13].

Table 2. Effect of treatment

	SMP (n = 18)			Antispasmodic (n = 17)			
	n	%	95% CI	n	%	95% CI	
Frequency of attacks of symptoms							
More	0			0			
Same	6			14			χ^2 = 8.5
Less	12	67	41–87%	3	18	4–43%	p < 0.00
Severity of attacks							
Worse	0			1			
Same	6			13			χ^2 = 8.5
Less	12	67	41–87%	3	18	4–43%	p < 0.00
Overall benefit from treatment							
Considerable help	9			2			
A little help	4			1			χ^2 = 10.4
No change/worse	5	28	10–53%	14	82	57–96%	p < 0.00
Future confidence in							
More confident	12	67	41–87%	5	29	10–56%	χ^2 = 4.8
No change	6			12			p < 0.0
Less confident	0			0			

The effect of treatment on symptoms in the two groups of patients assessed 6 months after commencement of the trial. CI = Confidence intervals.

Results

Eighteen patients were randomised to the SMP and 17 to receive conventional management which included the antispasmodic Colpermin. A predetermined concealed random allocation system was used. The age, sex ratio and numbers with symptoms of pain, abdominal distension and a change in bowel habit were similar in the two groups (table 1). The numbers who identified each of these symptoms as their major complaint were also similar in both groups; 18 complained particularly of pain, 8 of abdominal distension and/or flatulence, and 9 of a change in bowel habit. Rather more patients in the SMP group (16/18, 89%) related their symptoms to stress than in the antispasmodic group (11/17, 65%).

Almost all patients understood the information they had been given about IBS and found it helpful. However, when asked how they felt about the prevalent medical attitude of linking symptoms from IBS to stress, tension and diet, although 18 found it helpful, 19 admitted that it created difficulties when explaining the nature of their illness to friends, relatives and work colleagues.

Patients in the SMP group had a median number of six sessions (range 1–10), and 16 had four or more sessions. Sixteen reported they found the sessions helpful, and 13 continued to use the techniques they had learnt, 10 of them with most of their attacks and 3 sometimes. Eleven of the group found the exercises effective for relieving symptoms, and 12 admitted that relaxation exercises had been of value in other stressful situations they had encountered. None considered the course on relaxation a waste of time, and none found symptoms were made worse on implementing the exercises.

In contrast, few of those in the antispasmodic group noticed a reduction in the frequency or severity of symptoms (table 2). Only half of them took the drug for the whole 6-month period, and 4 who discontinued it prematurely did so because of side-effects or because they felt it was ineffective.

Comparison of the overall effect of treatment in the two groups showed a striking benefit in those given help in stress manage-

Table 3. Major symptoms in patients and treatment response

Symptoms	SMP (n = 18)		Antispasmodic (n = 17)	
	major symptoms on entering study	symptoms most improved	major symptoms on entering study	symptoms most improved
Abdominal pain	9	3	9	2
Flatulence/distension	5	5	5	0
Watery/soft stools	6	4	4	0
Constipation	0	1	1	0

Major symptoms identified by patients in the two treatment groups on commencement of the trial with the number who identified symptoms which improved most with treatment. Some patients identified more than one major symptom on admission to the trial.

ment (table 2). Both the frequency and severity of attacks decreased and most patients found symptoms more easy to cope with; they considered the programme of significant help, as well as giving them more confidence in dealing with the problem. With few exceptions, most of those given the antispasmodic found that both the frequency and severity of attacks remained unchanged and felt the treatment had made little difference to how they coped with the problem. At the final review, 12 months after commencement of the trial, with very exceptions, the earlier changes in frequency and severity of symptoms were maintained. The symptoms which improved most are compared with major symptoms present on admission to the trial (table 3).

Comparison figures are pertinent to the group in the SMP. All 5 patients who complained especially of distension and/or flatulence experienced most relief from this symptom; repsective figures for watery or soft stools were of benefit in 4 of 6 patients and for abdominal pain in 3 of 9.

Discussion

The patients treated by stress management were helped considerably; two thirds of them experienced a reduction in both the severity and frequency of atacks. Eleven of them found the relaxation helpful for relief of symptoms whilst 15 of them used the technique during attacks and felt more confident about dealing with future episodes. The main aim of our study was to examine the value of an SMP and compare it with conventional treatment for IBS. Patients were randomised, but most of them in the SMP (16 of 18) recognised an association between their symptoms and stress. Seventeen patients had received previous treatment, and 9 had used one or more antispasmodics but with little benefit; some of them were disappointed when randomised to receive this treatment again and were less than positive about the prospect. From the nature of the comparison made, no placebo for SMP could be devised, and neither patients nor the assessors could be blinded to treatment group membership; it is difficult to see how a firmer basis for recommending SMP could be sought. Those in the SMP group were given a great deal of personal attention on a one-to-one basis during the sessions, whereas the antispasmodic group were simply reviewed in the out-patients in a routine manner, where time was very limited. The striking improvement of patients in the SMP group could be attributed to the additional time given to these patients. One must concede that this may be partly responsible for the effect, but since 13 of them continued to use the exercises to limit attacks, components in the SMP must have been effective. Although all patients had been given written information about the role of stress in relation to irritable bowel with details of relaxation exercises, those on conventional treatment who were not given additional help on a personal basis failed to implement the exercises.

Colpermin was chosen as the antispasmodic given to those on conventional management because previous controlled trials have shown significant benefit from the drug which appears to relax smooth muscle by Ca^{++} channel blockade [14–18]. Poor results in this group of patients may be related to the fact that many in the trial had previously used other therapies including antispasmodics but without benefit. In addition, they

were given very little personal attention compared with the SMP group, most of whom had four or more 40-min sessions on a one-to-one basis with the physiotherapist.

The SMP is time consuming and requires a dedicated person or team of people to fulfil the service. Whether or not results from group therapy would be equally effective would require formal comparison by clinical trial. None of our patients expressed resentment or unease at the suggestion that they might see a physiotherapist for relaxation exercises. An invitation to see a psychiatrist or even a psychotherapist may have met with a different response.

The long-term clinical course of IBS involves frequent recurrence of symptoms [5, 19] leading in many patients to surgical intervention [20]; appendicectomy, hysterectomy, cholecystectomy, ovariectomy and division of abdominal adhesions are common additions to the patient's clinical file, but do little to prevent the recurrent symptoms over many years. In the early stages of clinical consultation, it is worth spending time with patients to give reassurance and some explanation of the nature of their symptoms which are likely to recur. The SMP appears to be of considerable additional value in controlling both the frequency and severity of future bouts of symptoms. Most pharmacological agents are at best of only very limited value, but patients who are both aware of this and able to control symptoms by relaxation exercises are less likely to present at surgical clinics seeking some form of an operation. The SMP was well accepted by patients, two thirds of whom benefited substantially both at the time of treatment and until 12 months later when the final review confirmed the benefit was maintained. The approach is accepted by patients, relatively effective and avoids more widespread use of sedative and antidepressant agents with their attendant side-effects. Improved understanding of the nature of symptoms and their control may in the long term even lead to less medical consultation with need for therapy.

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