

Effects of Fasting Therapy on Irritable Bowel Syndrome

Motoyori Kanazawa and Shin Fukudo

How to treat patients with irritable bowel syndrome (IBS) who do not respond to pharmacotherapy is an unsolved problem. Psychotherapy, which has been reported on in previous studies, is available only in specific centers. We describe in this study a novel and simple psychotherapy; that is, the fasting therapy (FT) for treatment of patients with IBS. Of 84 inpatients with IBS, 58 patients who still had moderate to severe IBS symptoms after 4-week basic treatment were investigated retrospectively. Of the 58 patients enrolled in this study, 36 underwent FT, whereas the remaining 22 received a consecutive basic treatment (control therapy). There were no significant differences in the 4-point severity scales of gastrointestinal and psychological symptoms between the 2 groups before the start of FT. The basic treatment consisted of pharmacotherapy and brief psychotherapy, whereas the FT consisted of 10 days of starvation followed by 5 days of refeeding. Changes in scores of symptoms before and after each treatment were analyzed. FT significantly improved 7 out of the 10 symptoms assessed; that is, abdominal pain–discomfort ($p < .001$), abdominal distension ($p < .001$), diarrhea ($p < .001$), anorexia ($p = .02$), nausea ($p < .01$), anxiety ($p < .001$), and interference with life in general ($p < .001$). However, the control therapy significantly improved only 3 out of the 10 symptoms assessed; that is, abdominal pain–discomfort ($p = .03$), abdominal distension ($p < .01$), and interference with life ($p = .01$). Our results suggest that FT may have beneficial effects on intractable patients with IBS.

Key words: irritable bowel syndrome, fasting therapy, psychotherapy, starvation

Irritable bowel syndrome (IBS) is a common disorder in developed countries and has significant impact on patient health and quality of life (QOL; Kanazawa et al., 2004; Sandler, 1990). Despite research efforts to develop a cure for IBS, medical treatment for this condition is still unsatisfactory (Drossman, Camilleri, Mayer, & Whitehead, 2002). Besides, how to treat IBS patients who do not respond to pharmacotherapy remains an unsolved problem. Because IBS patients have high morbidity to psychological abnormalities (Whitehead & Crowell, 1991), they often require psychobehavioral treatment, such as psychodynamic therapy (Guthrie, Creed, Dawson, & Tomenson, 1991), hypnotherapy (Whorwell, Prior, & Faragher, 1984), or cognitive behavior therapy (Toner et al., 1998). However, psychotherapy, such as hypnotherapy, greatly de-

pends on the therapist's skills, usually requires a long therapeutic duration, and is available only in specific centers.

Both in the East and the West, people have performed fasting as religious observance from ancient days. Fasting or caloric restriction has been used for the treatment of a large number of diseases, such as obesity (Fischer, 1967; Kollar & Atkinson, 1966), rheumatoid arthritis (Skoldstam & Magnusson, 1991), and schizophrenia (Faulkner, Soundy, & Lloyd, 2003). In Japan, fasting therapy (FT) has empirically been used as a psychotherapy for various kinds of psychosomatic disorders not only in our laboratory (Suzuki, Yamamoto, & Komuro, 1979; Suzuki, Yamauchi, Horikawa, & Yamagata, 1976) but also elsewhere (Komaki et al., 1990). FT, which has been modified in many studies to prevent the adverse effects of prolonged starvation, consists of 10 consecutive days of starvation followed by 5 days of refeeding (Suzuki et al., 1979; Suzuki et al., 1976). Although FT depends less on the therapist's skills and requires less time than the reported psychobehavioral treatments for IBS, no evidence has so far shown that FT is useful in treating intractable patients with IBS. The aim of this study was to retrospectively assess the effects of FT on the gastrointestinal (GI) and psychological symptoms of inpatients with moderate to severe IBS.

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Method

Participants

A total of 84 IBS patients (37 men and 47 women) were hospitalized at Tohoku University Hospital. They all satisfied both Manning's criteria (Manning, Thompson, Heaton, & Morris, 1978) and Rome criteria (Thompson, Dotevall, Drossman, Heaton, & Kruijs, 1989) for IBS. Organic disorders were excluded by blood chemical analysis, urinalysis, fecal analysis, plain X-ray films, and colonoscopy or barium enema (or both). After hospitalization, all patients were treated with a basic treatment that consisted of pharmacotherapy and brief psychotherapy. The pharmacotherapy included administration of antidepressants; benzodiazepine derivatives; or trimebutine maleate, a spasmolytic agent widely used for the treatment of IBS in Japan (or a combination of these things), whereas the brief psychotherapy was performed according to a previously reported method (Stewart, 1985). Inpatients who still had moderate to severe IBS symptoms of abdominal pain-discomfort, abdominal distension, constipation, or diarrhea (or a combination of these symptoms) after 4 weeks of basic treatment were enrolled in this study ($n=58$).

Grouping: Participants Allocation to Treatment Groups

The FT required an individual room in the hospital for at least 10 days because patients had to avoid meals and their physical conditions had to be intensively monitored. When an individual room was available after the 4-week basic treatment, IBS patients were allo-

cated to the FT. Otherwise, patients were allocated to a consecutive basic treatment. The FT group (women and men = 19 and 17, respectively [$n = 36$], M age = 28 ± 2 years) and consecutive basic treatment or control group (women and men = 14 and 8, respectively [$n = 22$], M age = 42 ± 4 years) were performed from Week 5 after the start of basic treatment. There was no difference in either women-men ratio or duration of IBS symptoms between the groups (FT group = 3.2 ± 0.6 years vs. control group = 5.3 ± 1.0 years). However, patients in the FT group were significantly younger than those in the control group ($p < .01$).

FT

The FT was performed according to a previously reported method (Suzuki et al., 1979; Suzuki et al., 1976). In brief, participants were subjected to 10 days of starvation followed by 5 days of refeeding. During the FT, the pharmacotherapy was disrupted but the brief psychotherapy was continued (see Figure 1). To avoid dehydration during the starvation period of FT, patients were requested to drink 1,000 ml to 2,000 ml of water per day. Moreover, to prevent hepatic or renal injury, 500 ml of 5% xylitol solution containing 3% amino acids, 20 mg of fursul-thiamine, 20 mg of flavin adenin dinucleotide, and 200 mg of ascorbic acid was intravenously administered to each participant once per day. During the refeeding period, caloric intake from meals was gradually increased from 225 kcal to 2,100 kcal for each patient. If IBS symptoms recurred after the refeeding period of FT and patients required drug treatment, the pharmacotherapy was restarted (see Figure 1).

Fasting group

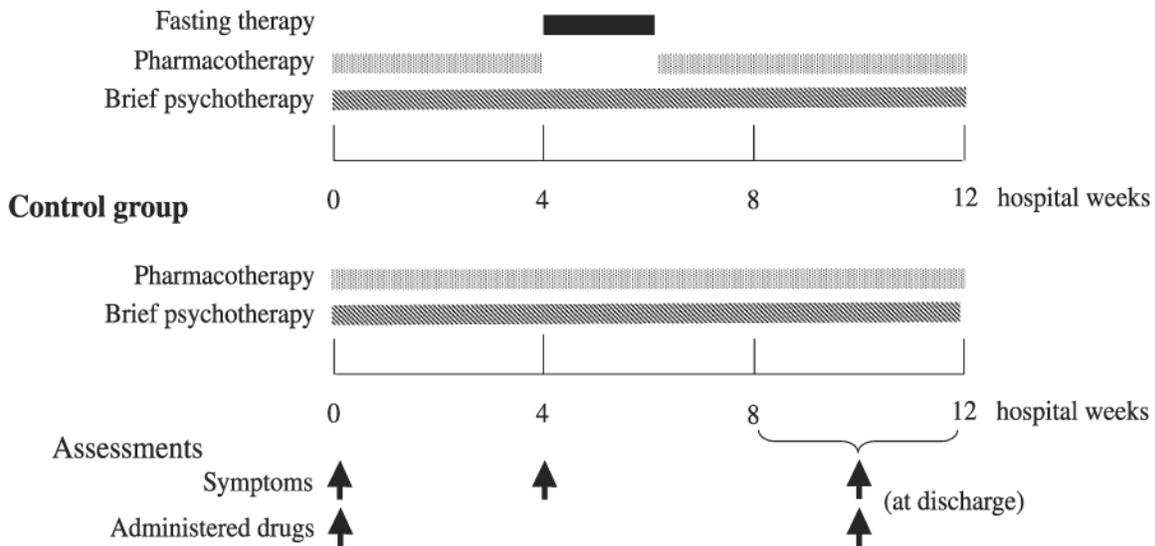


Figure 1. Design of this present study.