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Exposure and mindfulness based therapy for irritable bowel syndrome – An open pilot study

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ABSTRACT

We conducted a study of a group therapy based on exposure and mindfulness in the treatment of irritable bowel syndrome (IBS). Out of 49 outpatients, most of whom were referred from gastroenterological clinics, 34 entered into the 10-week treatment. Patients were assessed before, immediately after and 6 months after treatment. The assessments consisted of a gastrointestinal symptom diary, self-report questionnaires covering quality of life, gastrointestinal specific anxiety, general functioning, and a psychiatric interview. At post-treatment, the mean reduction in symptoms was 41% and 50% of patients showed clinically significant improvement in symptom level. Patients also showed marked improvement on other outcome measures. Treatment gains were maintained at follow-up. The results support the use of exposure and mindfulness based strategies in the treatment of IBS, but further randomised studies are needed to confirm the efficacy of the treatment.

1. Introduction

Irritable bowel syndrome (IBS) is the most common of the functional gastrointestinal disorders, affecting 5–11% of the adult population in most countries (Spiller et al., 2007). The IBS-diagnosis is based on the Rome III criteria which include abdominal pain or discomfort combined with diarrhea and/or constipation (Longstreth et al., 2006). Medical treatments for IBS are focused on alleviation rather than cure of symptoms (Lacy & Lee, 2005), and the illness has a major impact on quality of life (Halder et al., 2004). The societal costs of IBS are high. Compared to normal controls IBS-patients are three times more likely to be absent from work (Drossman et al., 1993) and utilize health care at almost double the cost (Talley, Gabriel, Harmsen, Zinsmeister, & Evans, 1995). At least half of patients with IBS suffer from co-morbid psychiatric illness (Spiller et al., 2007), the most common being depression, generalized anxiety disorder, and panic disorder (Whitehead, Palsson, & Jones, 2002).

In a series of small trials during the 80s and 90s cognitive behavior therapy (CBT) demonstrated strong effects on IBS symptoms (Blanchard, 2001; Lackner, Mesmer, Morley, Dowzer, & Hamilton, 2004). However, the outcomes of two recent large scale controlled trials of CBT for IBS were not as positive (Blanchard et al., 2007; Drossman et al., 2003). In light of the inconsistent effects of traditional CBT, Naliboff and colleagues suggested that CBT approaches targeted at other mechanisms than altering the content of thoughts, specifically mindfulness meditation and acceptance and commitment therapy (ACT), should be tried as treatments for IBS (Naliboff, Frese, & Rapgay, 2008). The goal of ACT and mindfulness meditation is to decrease "experiential avoidance", defined as the unwillingness to experience aversive bodily sensations, emotions, and thoughts (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Experiential avoidance is assumed to result in long-term mental suffering – such as psychiatric disorders – when it is used as a strategy to control private events that are not controllable by will, or where the process of avoidance increases the strength of the undesired experience, or when the means of avoidance create additional suffering (Hayes et al., 1996).

For IBS-patients the experience of the bodily sensations associated with the illness is often aversive and anxiety-provoking, a phenomenon referred to as GI-specific anxiety (GSA). GSA is defined as "the cognitive, affective, and behavioral response stemming from fear of GI sensations, symptoms, and the context in which these visceral sensations and symptoms occur" (Labus,

Abbrevations: ACT, Acceptance and commitment therapy; GI, Gastrointestinal; GSA, GI-specific anxiety; VSI, Visceral sensitivity index; IBS-QOL, Irritable bowel syndrom quality of life instrument; MADRS-S, The montgomery åsberg depression rating scale – self report; CGI, Clinical global impression scale.

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Mayer, Chang, Bolus, & Naliboff, 2007, p. 89). Anxiety can in itself cause altered motility and increase awareness of pain, and GSA is therefore proposed to be a perpetuating factor in IBS through positive feedback loops (Mayer, Naliboff, Chang, & Coutinho, 2001). The behavioral consequences of GSA, i.e. attempts to decrease or avoid it, are also likely to maintain the disorder. For example, avoiding social or work-related situations when experiencing symptoms can cause social isolation and depression, worsening the symptoms through increased anxiety (Naliboff et al., 2008). A common behavior like distraction from the associated pain is probably not very effective and might even increase the awareness of pain (Cioffi, 1991; McCracken, 1997). This interplay between GSA and avoidance behaviors maps well onto the concept of how experiential avoidance can cause long-term suffering.

In the present study we developed and evaluated a CBT-protocol aimed at decreasing experiential avoidance in association with IBS. The protocol consisted of mindfulness exercises and exposure to GSA and IBS symptoms. Mindfulness can be described as "the intentional process of observing, describing, and participating in reality non-judgmentally, in the moment" (Robins, Schmidt, & Linehan, 2004, p. 37), and has shown promising effects in the treatment of disorders such as stress, chronic pain, depression and anxiety (Grossman, Niemann, Schmidt, & Walach, 2004). Exposure therapy can be defined as facilitating and encouraging the individual to expose him or herself to an aversive stimulus and simultaneously engaging in a behavior that is inconsistent with the emotion that the stimulus elicits (Farmer & Chapman, 2008). We hypothesized that engaging in exposure and mindfulness exercises would decrease IBS-symptom, improve quality of life and global functioning and lessen GI-specific anxiety. We also hypothesized that willingness to be in contact with negative experiences would lead to a general increase in mental health.

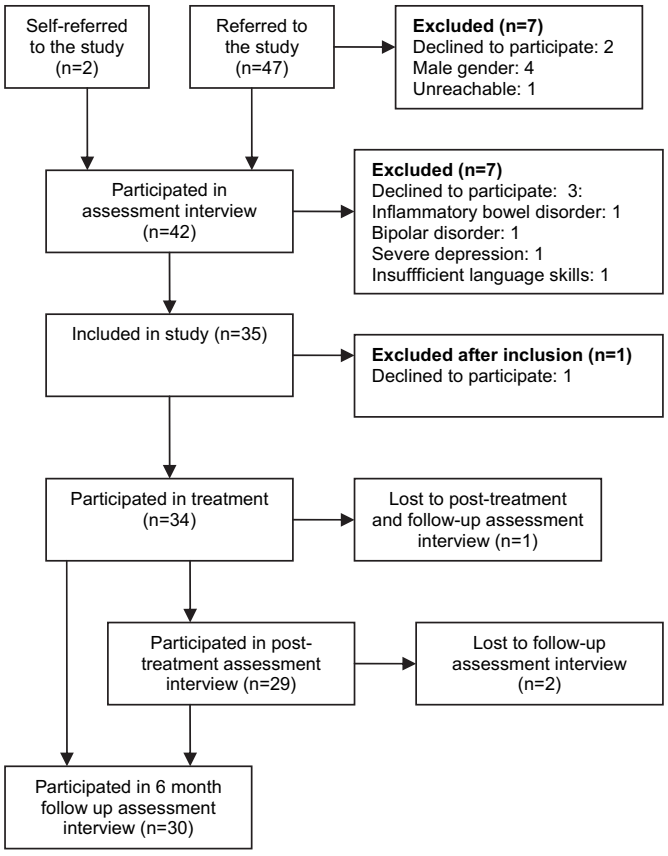

Fig. 1. Patient flow through the study.

2. Method

2.1. Participants

The study was approved by the local ethics committee. Information about the study was spread to gastroenterological clinics in the local area and patients were referred to the study psychiatrist (S. A.). Most patients were referred from their gastroenterologist ($n = 45$). Self-referrals ($n = 2$) or referral from GP ($n = 1$) or psychiatric outpatient clinic ($n = 1$) were accepted when the patient had an IBS-diagnosis verified from a gastroenterological clinic. The study psychiatrist judged eligibility for the study, confirmed that patients fulfilled IBS diagnostic criteria (Longstreth et al., 2006) and obtained informed consent. Inclusion criteria were female gender and age 18–65 years. Patients were excluded if any somatic or psychiatric disorder deemed to interfere with treatment was present. Fig. 1 displays an overview of the number of patients at the different stages of the study. A total of 49 patients were referred or self-referred to the study and 34 participated in treatment. The mean age of participants was 34.6 years (SD = 11.0) and the reported mean time of suffering from IBS symptoms was 11.2 years (SD = 7.8).

2.2. Assessments

Patients were assessed through psychiatric interview and self-report questionnaires before treatment, immediately after treatment and 6 months after treatment. Some questionnaires administered at the interviews were lost, a total of 6 self-report questionnaires were missing for 4 patients at data analysis.

2.2.1. The GI symptom diary

At each assessment patients completed four weeks of the GI symptom diary (Blanchard, 2001), with the exception of the first four patients included who only completed two weeks of symptom diary at pre- and post-treatment. The GI symptom diary is a measure of primary IBS symptoms (abdominal pain and tenderness, diarrhea, constipation, and bloating) and additional common gastrointestinal symptoms (flatulence, belching and nausea). Daily severity of each symptom is rated from 0 (not a problem) to 4 (debilitating).

2.2.2. Visceral sensitivity index (VSI)

The VSI (Labus et al., 2004) measures GI-specific anxiety (GSA), has 15 items and is scored between 0 (no GSA) and 75 (severe GSA). The VSI has good psychometric properties and has been shown to be a key explanatory variable of IBS diagnostic status (Labus et al., 2007). To our knowledge, the VSI has not yet been used as an outcome measure in studies on the effects of CBT for IBS.

2.2.3. Irritable bowel syndrom quality of life instrument (IBS-QOL)

The IBS-QOL (Patrick, Drossman, Frederick, DiCesare, & Puder, 1998) is used to assess the impact on quality of life specifically for patients with IBS. The IBS-QOL consists of 34 items and includes domains such as dysphoric thoughts, symptoms interference with activity, food avoidance, and impact on relationships. The score ranges between 0 (minimum quality of life) and 100 (maximum quality of life). The scale has good psychometric properties (Patrick et al., 1998) and is responsive to treatment effects (Drossman et al., 2000).

2.2.4. Secondary self-report outcome measures

The Montgomery Åsberg Depression Rating Scale – Self report (MADRS-S; Svanborg & Åsberg, 1994) is a well-established self-