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Psychological profiles and quality of life differ between patients with dyssynergia and those with slow transit constipation

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Abstract

Background: Pathophysiological characteristics differ between slow transit constipation (STC) and dyssynergic defecation, but whether psychological profiles and quality of life (QOL) are altered and whether they differ among these constipation subtypes are unknown. **Methods:** We prospectively evaluated psychological profiles and QOL in 76 patients with dyssynergia, 38 patients with STC, and 44 control subjects using the Revised 90-item Symptom Checklist and 36-item Short-Form Health Survey. In addition, we examined the correlations of psychological and QOL domains with constipation symptoms and pathophysiological subtypes. **Results:** Symptom scores for hostility and paranoid ideation were higher ($P<.001$) in patients with dyssynergic defecation than in patients with STC and control subjects. Scores for other psychological domains were higher ($P<.0001$) in patients with dyssynergic defecation and those with STC than in control subjects. Most QOL subscores were impaired ($P<.05$) in patients with dyssynergic defecation and some were impaired in patients with STC as compared with control subjects, but the two patient groups did not differ on these. The QOL subscores were strongly correlated ($r_c \approx .9$) with the psychological subscores in patients with dyssynergic defecation and those with STC, although more QOL subscores among patients with dyssynergic defecation and more psychological subscores among patients with STC primarily contributed to the canonical correlations. A set of six commonly reported constipation symptoms showed significant correlations with QOL and psychological subscores, more so among patients with STC than among patients with dyssynergic defecation. **Conclusions:** Patients with dyssynergic defecation had greater psychological distress and impaired health-related QOL as compared with patients with STC and control subjects. Both patient groups were also more affected as compared with the control group. There was a strong correlation between psychological dysfunction and impaired QOL, and both also correlated with constipation symptoms.

Keywords: Psychology; Quality of life; Constipation; Dyssynergia; Pathophysiology; Symptoms

Introduction

Chronic constipation affects between 12% and 19% of Americans and is regarded as one of the most common digestive complaints [1]. In addition to the physical illness, many affected patients exhibit psychological dysfunction [2–5] and many have evidence of current or previous psychoaffective disorders [6]. Constipated patients with normal colonic transit have been shown to be more likely to (1) report psychological distress as compared with patients with slow transit constipation (STC) [7–9] and those with pelvic floor dysfunction [10] and (2) use antidepressants or receive psychiatric counseling [11]. In another study, the clinical outcome of surgery for chronic constipation was significantly influenced by the underlying psychology:

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patients with psychological dysfunction tended to have a poorer outcome as compared with those without it [12]. A recent study also described either defective or ineffective coping strategies in patients with functional constipation [13]. In contrast to these studies, one Canadian study found no correlation between psychological distress and stool frequency in patients with STC [14].

In two large population-based studies, patients with self-reported constipation had lower scores for quality of life (QOL) as compared with control subjects [15,16]. In another study, patients with normal transit constipation had lower scores as compared with patients with STC [9], but patients with dyssynergia were not assessed. In a brief and uncontrolled survey, we observed that patients with dyssynergic defecation had some impairment of QOL [17].

Thus, whether psychological traits and QOL are altered in patients with dyssynergic defecation and whether they differ between patients with dyssynergia and those with STC have not been prospectively evaluated. We tested the following hypotheses:

1. Constipated patients with dyssynergic defecation have greater psychological dysfunction and more impaired health-related QOL as compared with patients with STC and control subjects.
2. There are strong correlations between psychological dysfunction and impaired QOL in constipated patients.

The aims of our study were to (1) evaluate prospectively and compare psychological profiles and QOL in patients with dyssynergic defecation, patients with STC, and control subjects and (2) correlate symptoms and pathophysiological subtypes with psychological profiles and QOL.

Methods

Consecutive patients referred to our tertiary care center with symptoms of chronic constipation and those who fulfilled the Rome II criteria for functional constipation [18] were eligible for participation in this study. Patients with secondary causes of constipation, including drug-induced constipation [19], and those with abdominal pain or discomfort and/or features suggestive of irritable bowel syndrome and constipation or significant comorbid illnesses, including those requiring previous abdominal or pelvic surgeries except for cholecystectomy and appendectomy, were excluded [18]. In addition, patients with a known psychiatric illness or psychological problems and those under active follow-up with a psychiatrist or psychologist were excluded.

All of these patients underwent standard physiological tests, including a colonic transit study, an anorectal manometry, and a balloon expulsion test, using established techniques [20,21]. These tests provided an assessment of the underlying pathophysiology. Patients were considered to have dyssynergic defecation if they fulfilled Rome II symptomatic criteria for functional constipation [18], demonstrated a manometric pattern consistent with dyssynergia during an attempted defecation, and had either an abnormal balloon expulsion test finding or a prolonged colonic transit study [20]. Patients were considered to have STC if they had a normal anorectal manometry as well as normal balloon expulsion test findings and showed 20% or greater retention of markers on a plain X-ray of the abdomen taken 120 h after ingestion of a single capsule containing 24 radio-opaque markers [19,20,22]. Patients with normal transit and normal pelvic floor function were excluded. Data obtained from these subjects were also compared with those from a group of control subjects. The control subjects reported a normal bowel habit on a questionnaire, had normal physical examination findings, and were not using any medication other than multivitamins and oral contraceptives. Subjects were excluded if they had undergone an abdominal surgery other than cholecystectomy and appendectomy.

Psychological profiles were assessed by administering the Revised 90-item Symptom Checklist (SCL-90-R), whereas QOL was assessed by administering the 36-item Short-Form Health Survey (SF-36) [23] Subjects were also asked to provide information regarding the presence and severity of six commonly reported symptoms (Rome II: excessive straining, hard stools, feeling of incomplete evacuation, use of digital maneuvers, infrequent defecation, and sensation of anal blockage) on a questionnaire using a Likert-type scale (1=*never*, 2=*occasionally*, 3=*often*, 4=*very often*, and 5=*almost always*). All subjects provided their written informed consent, and the study protocol was approved by the institutional review board.

Data and statistical analyses

The SF-36 data were assessed in eight domains, with each domain including three to four questions. These domains included physical functioning, role–physical (limitation of daily activities resulting from physical health problems), bodily pain, general health, vitality, social functioning, role–emotional (limitation of daily activities resulting from emotional problems), and mental health. A higher score on the SF-36 represented normal or better functioning. The SCL-90-R data were analyzed under nine domains; these consisted of depression, obsessive–compulsiveness, paranoid ideation (suspiciousness and feeling that others are to blame or cannot be trusted), psychoticism (hallucination, withdrawal, and isolation), somatization, interpersonal sensitivity (feelings of inadequacy and inferiority), anxiety, hostility, and phobic anxiety (persistent fear response). A higher score on SCL-90-R domains represented abnormal function or increased psychological distress. These domains were compared between the two