Eating Behaviors 19 (2015) 106–109

Contents lists available at ScienceDirect

Eating Behaviors

Illness anxiety and avoidant/restrictive food intake disorder: Cognitive-behavioral conceptualization and treatment

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ARTICLE INFO

Article history:
Received 9 September 2014
Received in revised form 5 March 2015
Accepted 11 May 2015
Available online 10 June 2015

Keywords:
Disturbed eating
Avoidant/restrictive food intake
Eating phobia
Illness anxiety
Hypochondriasis
Health anxiety

ABSTRACT

Eating difficulties are commonly present in medical and psychiatric settings. Some eating problems are resultant from fears about food consumption and can be conceptualized as anxiety disorders conditioned by perception of feared outcomes associated with eating and maintained by avoidance. The authors present a case in which a female patient with limited food intake is successfully treated with cognitive-behavioral therapy. Illness anxiety disorder and avoidant/restrictive food intake disorder, both newly included in DSM-V, are applied in this case.

1. Introduction

Patients with eating problems that cannot be explained by their medical condition commonly present in treatment settings. While such difficulties can be precipitated by a number of medical circumstances (e.g. chemotherapy, pregnancy), the severity may exceed that expected for a given condition and/or may persist beyond the expected resolution period. This leaves providers with the perplexing question of whether the eating difficulty is "medical or psychiatric" in nature.

Such eating difficulties are likely attributable to a combination of medical and psychiatric factors, and can be conceptualized similar to anxiety disorders. Applying Mowrer's two-factor model of anxiety (Mowrer, 1960), fear of eating can be shaped by classical conditioning (i.e. repeated pairings of eating with gastrointestinal sensations interpreted as highly threatening and/or associated with previous traumatic outcomes) and maintained by operant conditioning (i.e. refusal to eat reduces anxiety experienced when encountering eating cues thus negatively reinforcing food avoidance). Additional psychosocial factors may shape and maintain eating-related anxiety, including reinforcing aspects of being in the "sick role" and family pressure to eat (Galloway, Fiorito, Francis, & Birch, 2006; Taylor & Asmundson, 2004).

The DSM-5 includes the new diagnosis avoidant/restrictive food intake disorder (ARFID). It describes cases in which eating difficulties develop in the absence of body image disturbance typically associated with traditional eating disorders, and which are not explained by medical condition, availability of food, or cultural/religious practices (American Psychiatric Association, 2013). The present paper reviews the conceptualization and treatment of ARFID that re-emerged in a patient with a longstanding history of illness anxiety disorder, and previous episodes of eating difficulty related to fear of gastrointestinal symptoms following traumatic childhood experiences with Crohn's disease.

Illness anxiety disorder consists of fears of having or acquiring an illness. The cognitive-behavioral framework conceptualizes illness anxiety as threatening evaluations of essentially benign bodily sensations coupled with fear of an undiagnosed illness and maladaptive behaviors that are intended to help escape or avoid this distress (Abramowitz & Braddock, 2006). Cognitive-behavioral therapy has been shown to be effective in the treatment of illness anxiety (Clark, Salkovskis, Hackman, et al., 1998; Sørensen et al., 2011). Systematic desensitization is a method of counterconditioning with established efficacy for anxiety disorders (e.g., phobias) which share common behavioral features with the eating-related avoidance that will be discussed in the present case. Because the diagnosis of ARFID is new to the DSM-5, there is minimal literature available to guide treatment, with most of the available research focused on children. However, a recent adult case study (Millikin & Braun-Janzen, 2013) outlined the successful

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http://dx.doi.org/10.1016/j.eatbeh.2015.05.010
1471-0153/

utilization of systematic desensitization with in-vivo exposure and cognitive restructuring techniques (e.g., evaluating the likelihood of choking) in a case of eating avoidance due to fears of choking.

2. Case report

Ms. Q was a 41-year-old woman admitted to the inpatient psychiatry unit of an academic medical center with poor food intake. She had been in outpatient treatment with a psychiatrist for anxiety and dysthymia, but concern about her inability to eat and associated weight loss led to her admission for medically supervised treatment. Ms. Q had lost 24 lbs in 4 months, reducing her BMI to 15.5 kg/m^2. The patient had never been psychiatrically hospitalized in the past and denied suicidal thoughts. Her multidisciplinary team included psychiatrists, nurses, social worker, dietician, neurologist and speech pathologist. Her medical and nutritional statuses were also monitored by the gastroenterology service. Ms. Q was initially treated with lorazepam 1 mg before meals and paroxetine 40 mg daily. The health psychology team was consulted at week two (of four) of her hospitalization, after the patient did not improve with medications and standard milieu. The patient's consent for treatment, as well as consent for use of the anonymized case information for educational, learning, and research purposes was obtained.

For initial evaluation by health psychology, the patient participated in a diagnostic interview and completed the Personality Assessment Inventory (PAI) (Morey, 1991) and the Health Anxiety Index (HAI) (Salkovskis, Rimes, Warwick, & Clark, 2002). Ms. Q's medical history was significant for gastroesophageal reflux disease, supraventricular tachycardia and uterine fibroids. She also had Crohn's disease as a child with no recurrences since late adolescence. On evaluation, Ms. Q noted she had stopped eating due to perceived abdominal bloating, early satiety, chest palpitations, shortness of breath, sensations in her throat, and fears that she would choke and die. Each bite she took was time-consuming due to her fears of choking and she was convinced that a medical problem underlay this cycle.

Comprehensive evaluation ruled out any medical causes for the patient's eating disturbance, though it was presumed that a brief bout of gastroenteritis 6 months prior may have triggered return of a preoccupation with gastrointestinal sensations established during the time she was repeatedly hospitalized with Crohn's as a child. She exhibited a confirmation bias in selectively attending to information (i.e. frightening physical sensations, catastrophic interpretations) that suggested illness and discounting information that was suggestive of good health (i.e. negative findings on physical exams, diagnostic tests, and lab studies). She reported previous episodes of difficulty eating associated with fear of gastrointestinal symptoms and a history of other avoidance behaviors related to various health concerns (e.g. avoiding the outdoors due to fears of a severe allergic reaction). Her avoidance of eating and subsequent weight loss was more significant than it had ever been previously.

Ms. Q had never been married and had no children, although she endorsed a desire for both. She acknowledged that her frequent hospitalizations due to childhood Crohn's felt reassuring and she had enjoyed the attention and care she received from others during that time. As an adult, she held a variety of medical clerical jobs. Prior to her present difficulties, she was able to function at work although she was not particularly satisfied with clerical work. Several months prior to her admission, she felt she was too ill to work. She left her job and moved back in with her mother after living independently for years.

Ms. Q denied body image disturbance, undue influence of body image on her self-esteem, or desire to lose weight/preference for thin body. She understood the health risks of remaining at her low body weight and endorsed desire to return to her previously healthy weight both to protect her health and improve her appearance. Given that anorexia nervosa is often characterized by denial, we retained a rule out diagnosis of anorexia initially, but considered her stated desire to gain weight and willingness for treatment as indicators her symptoms were not likely accounted for by anorexia. As her treatment progressed and she willingly gained weight without any apparent or reported distress, we were able to rule out anorexia.

The PAI revealed significant anxiety and a high degree of concern about physical functioning (Somatic Complaints T score = 82; Anxiety T score = 77). The HAI indicated clinically significant health-related anxiety with a total score of 37 on the inventory. Ms. Q met criteria for DSM-5 ARFID as well as Illness Anxiety Disorder (American Psychiatric Association, 2013). Recent research suggests ARFID is often comorbid with anxiety disorders (Fisher, Rosen, Ornstein, et al., 2014).

In our conceptualization, Ms. Q had long suffered with illness anxiety, and her current eating difficulties reflected a re-emergence of previous fears of eating that had developed during her experience of Crohn's disease. The trigger for the current episode was likely a bout of acute gastroenteritis that re-sensitized her focus on gastrointestinal sensations (see Fig. 1). Previously established patterns with regard to receiving care, familial concern and pressure to eat, and relief from expectations to perform previous social and work roles further reinforced the pattern of food avoidance and fear of an unknown medical condition.

Cognitive and behavioral techniques, specifically psychoeducation, systematic desensitization, and cognitive restructuring, were employed in this case (see Table 1). Psychoeducation included physical symptoms of anxiety and how these could be misconstrued as signs of gastrointestinal illness or choking. The patient's conditioned avoidance of eating was conceptualized with her utilizing Mowrer's two-factor theory of avoidance (Mowrer, 1960). Ultimately, brief gastroenteritis reconditioned her fear of gastrointestinal sensations that likely developed when she was suffering with Crohn's disease symptoms. This led to hypervigilance towards and catastrophic interpretations of benign gastrointestinal sensations, and fear reactions in the presence of eating cues as eating was associated with these sensations. When encountering eating cues, her fear increased and escaping/avoiding eating resulted in immediate reduction of anxiety. This fear reduction negatively reinforced her eating avoidance and prevented extinction of the conditioned association between eating cues and fear of dying/having a serious illness associated with gastrointestinal sensations. Also discussed were experiences of being in the "sick role"; garnering attention and support from friends and family, and how her symptoms allowed her to avoid anxiety provoking situations and pursuit of life goals.

Systematic desensitization sessions utilized in-vivo exposure during her meal times. The patient formulated a graded fear hierarchy of foods from those that were "safe" (e.g. soup) to those that were "unsafe" (e.g. meats). Relaxation training was introduced to help her adaptively cope with anxiety. Graduated exposure was focused on increasing the amount of food Ms. Q ate, and then increasing the variety of foods. She was given the goal of eating larger bites and eating more rapidly as sessions progressed. Subjective ratings of anxiety on a scale of 1 (none) to 10 (extreme) were obtained at regular intervals. Initially, the patient wanted to stop eating after just a couple of bites due to feelings of fullness or discomfort but she was instructed to eat past her level of discomfort. Pre-meal anxiety during the first session was 8 out of 10. Peak anxiety occurred during session 5 when she first re-introduced meat to her diet (10/10). At her last inpatient session, her pre-meal anxiety had reduced to 3/10 (see Fig. 2).

Cognitive restructuring was utilized to help the patient identify evidence for and against her catastrophic beliefs about gastrointestinal sensations. She initially estimated a 60% likelihood her throat tightness presaged choking. During treatments, she was reminded that all previous instances of throat tightness had been mild with benign outcomes. Specific feedback from speech pathology about normal swallowing sensations helped Ms. Q to interpret gastrointestinal signals as normal bodily reactions related to digestion and physiologic symptoms of anxiety. By session 6, the patient was able to recognize the feared consequences of eating did not actually occur. By learning