Case Report

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Case Report: Novel Treatment for Functional Dyspepsia Combined Drugs and Psychosomatic Therapy

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ABSTRACT

Functional dyspepsia is a common functional gastrointestinal disorder according to Rome IV and received less attention over past years. Association between gut and brain has been revealed recently, which leads to novel treatments of functional gastrointestinal disorder including different psychosomatic therapy ways. Here, we present a classical functional dyspepsia patient with anxiety and depression. We treated the patient with drugs combined psychosomatic therapy, such as Wuling capsule, cognitive behavioral therapy, and happiness therapy. Both syndromes of dyspepsia and anxiety-depression has been improved after 6 weeks' treatments. This case reveals importance of psychosomatic therapy in functional gastrointestinal disorder and suggests individualized treatment is potentially effective strategy for psychosomatic disorder.

Keywords: Functional Dyspepsia; Psychosomatic Therapy; Wuling Capsule; Cognitive Behavioral Therapy; Happiness Therapy

Introduction

Functional gastrointestinal disorders (FGIDs) have high morbidity of 40% approximately, and about 60%-70% of them suffer from chronic symptoms recurringly [1]. In spite of variable symptoms of FGIDs, the dysregulation of gut-brain interaction, imbalance of intestinal microecology, alteration of mucosal immune function, and hypersensitivity of viscera all contribute to pathogenesis of FGIDs distinctly [1,2]. Functional dyspepsia is a common disease of FGIDs that manifested as upper abdominal pain or discomfort, early feeling of fullness, burning, nausea, belching, bloating etc. In terms of different symptoms and patients' possible pathogenic factor, we need to design individual therapy for patients. Recently, the communication between brain and gastrointestinal tract has been revealed also as known as gut-brain axis [1,3,4]. Microbiota, immune systems, also nutrients metabolism including fatty acids, tryptophan, and peptidoglycans, were indicated pathways of gut-brain interaction [1,5,6]. Patients diagnosed as FGIDs tend to suffer from mood disorders. Approximately 60% of treatment-seeking FGIDs patients have psychiatric symptoms, compare to 25% of adults suffer from mental disorder [2]. It indicates that psychiatric symptoms have significant association with FGIDs. Simultaneously, cognitive and psychological effects on gut-to-brain and brain-to-gut communications got increased

attentions [6]. Clarifying psychosomatic interaction in FGIDs helps consolidate the role of drug treatment combine psychosomatic therapy.

FGIDs involved gut-brain axis interacts bidirectionally. For example, anxiety is an independent predictor for FGIDs and patients developed for FGIDs also followed by anxiety and depression [7,8]. Therefore, we deduced that psychosomatic therapy has effect on FGIDs through improving psychiatric symptoms, and treatments targeting on digestive symptoms also improve psychiatric symptoms. In this case, we combined psychosomatic therapy with common drug treatments, such as cognitive behavioral therapy and happiness therapy. Cognitive behavioral therapy (CBT) is helpful to psychosomatic disorders which including functional dyspepsia [9-11]. However, CBT did not received attention from clinical doctors because of time-taking and skillful talking therapy. CBT focuses on patients' environment factors and social relationships and was confirmed to be effective for FGIDs [12]. Based on CBT, Happiness therapy emerged recently. Happiness therapy is a kind of talking therapy, which aims at satisfied patients with life events, and being positive to worried events [13-15]. CBT and happiness therapy target on gut-brain axis and regulate digestive symptoms through relieving anxiety or depression.

It is worth mentioning that Wuling capsule, a Chinese patent drug, has effect on FGIDs. Wuling capsule increased central gamma-aminobutyric acid (GABA) concentration through enhancing the permeability of blood-brain barrier and increasing the activity of glutamic acid decarboxylase (GAD) [16,17]. Otherwise, Wuling capsule also improved the activity of GABA receptor [16]. In conclusion, Wuling had certain effect for anti-anxiety and protecting brain function, and was confirmed

with several clinical trials [18-20].

Case Description

A 57-year-old female was admitted to the gastroenterology due to repeat bloat and discomfort for more than 1 year, and aggravation for 2 months. The patient felt bloating and discomfortable especially after meals, followed by nausea and vomiting sometimes. The symptoms aggravated over the 2 months, and the patient felt anorexic and loss weight for 15 kg. Involuntary jitter of hangs and chin because of epilepsy. There was no complaint of abdominal pain, diarrhea, or fever. There was past history of hypertension, cerebral hemorrhage, epilepsy. The patient was taking in amlodipine besylate tablets, atorvastatin calcium tablets, citicoline sodium tablets, clopidogrel hydrogen sulphate tablets, and in good recovery. It's worth to be mentioned, the patient worried about severe disease unknown.

On physical examination, tenderness was touch in upper-middle abdomen, and involuntary jitter of hangs and chin was observed. BMI = 21.63 kg/m2. Blood routine examination showed hemoglobin 110 g/L, platelet 46×109 /L. Gastroscope and pathology showed chronic non-atrophic gastritis, helicobacter pylori (Hp.) infection. Colonoscopy showed colon polyp. Pneumobarium double contrast radiography demonstrated reduced gastrin motility. Other examination, like computed tomography of intestine, magnetic resonance imaging of brain, electroencephalogram, blood examination, marrow examination etc., revealed no significant feature.In addition, we evaluated patient's psychological state with Hamilton Anxiety Scale (HAMA), Self- rating depression scale (SDS), Pittsburgh sleep quality index (PSQI). Score 12 of HAMA, 52 of SDS, 11 of PSQI represented mild anxiety, mild depression and somnipathy respectively. Summarily, the patient was diagnosed as "functional dyspepsia, state of anxiety and depression, chronic non-atrophic gastritis, Hp. infection, post-polypectomy, hypertension, cerebral hemorrhage, epilepsy.

Diagnostic Assessment

Therapeutic Intervention

Drug Treatment: Besides drugs already taken in for chronic original diseases, L-glutamine and sodium gualenate granules for gastric mucosa repairment, bacillus subtilis capsules for microecological regulation, itopride hydrochloride tablets and Weisu granules for motility improving, Wuling capsule for emotion regulation, were taken as manual protocols.

Psychosomatic Therapy: CBT and happiness therapy were carried out once a week. The principles of CBT include positive thinking, confidence training, negative thought stopping. In details, when talking to patient, the doctor persuaded the patient to pay more attention to positive thoughts, stop worrying about painful events, and express inward feels, aspirations, opinion, even discontents. In contrast, happiness therapy is more practical. Happiness therapy focus on driving patient to record positive life events, which amplified satisfaction and happiness. For example, diary for kindness, visit for appreciation, and record for positive thoughts. Combining psychosomatic therapy with drug treatments constituted individual therapy for the patient and received clinical efficacy.

Cure for Hp: We delayed Hp. cure in consideration of Hp. cure-related drugs aggravating discomfort and vomit, which effect patient's compliance and feelings.

Follow-up and Outcomes: After 2 weeks' treatment, the digestive symptoms were relieved, hemoglobin and platelet recovered to ormal level. After 6 weeks' treatment, digestive symptoms disappeared mainly, weight got an increase of 6 kg. As for psychiatric symptoms, related scores decreased to 7 of HAMA, 40 of PSQI, 7 of PSQI (Figure 1), represented individual therapy benefited both physical and psychiatric symptoms.

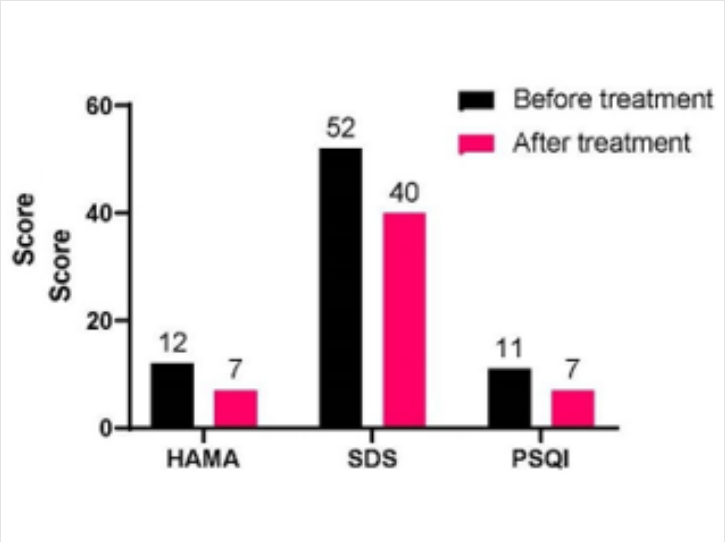

Figure 1: HAMA, SDS, PSQI scores before and after therapy. HAMA, Hamilton Anxiety Scale; SDS, Self-rating depression scale. PSQI, Pittsburgh sleep quality index.

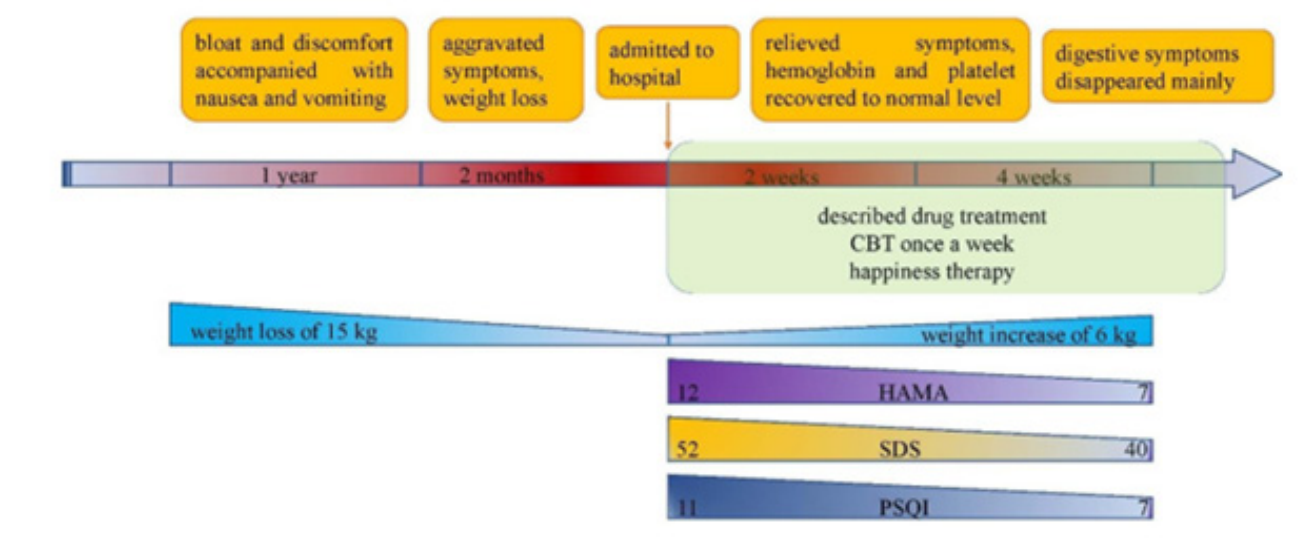

Figure 2: Timeline of the patient's symptoms and treatments.

Conclusion: Reviewed from the timeline, we summarized the disease process as Figure 2. The patient complained of bloat and discomfort for over 1 year, which aggravated for 2 months. After admitted to hospital, the patient diagnosed as "functional dyspepsia with anxiety and depression" chiefly. We designed an individual therapy including drug treatment and psychosomatic therapy, as described above. The patient recovered from both digestive symptoms and psychiatric symptoms after 6 weeks' therapy. From this case, we deduced that both drug treatment and psychosomatic therapy played an important role in functional dyspepsia. Refer to gut-brain axis of FGIDs, we recommend individual therapy to FGIDs patients, especially emphasize the role of psychosomatic therapy in patients who suffer from psychiatric symptoms.

Discussion

Digestive psychosomatic disorder is widespread but ignored by clinical doctors usually. The patients do not come to doctor or misdiagnosed have an effected quality of life [QOL). For patients diagnosed as FGIDs, we recommended a quick assessment of psychiatric symptoms. Comprehensive evaluation and individual

therapy help to improve QOL of digestive psychosomatic patients. Wuling capsule consists of Wuling powder singularly, with explicit pharmacological mechanism of antianxiety and brain protection [19,20]. In the meanwhile, Wuling capsule showed little side-effect and is worth of long-term use [21,22]. There were also limitations in the work. In order to clear out the superiority of combined therapy, we need to organize randomized controlled trial (RCT) for further study. For another, traditional Chinese medicine (TCM) treatment concept direct to digestive psychosomatic disorder emerged recently.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial

relationships that could be construed as a potential conflict of interest.

Author Contributions

C.W. monitored the clinical therapy progress. C.W., C.Z. and Y.C.design the therapy protocols, C.W.,

Y.W. and Y.C. carried out the therapy for the patient. Y.W., C.Z. and C.W. wrote the paper.

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