Comprehensive Psychiatry 87 (2018) 32–37

Contents lists available at ScienceDirect

Comprehensive Psychiatry

journal homepage: www.elsevier.com/locate/comppsych

Somatic symptoms vary in major depressive disorder in China☆

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ARTICLE INFO

Available online xxxx

ABSTRACT

Purpose: This study aimed to investigate the clinical characteristics of somatic symptoms of patients in China who suffer from major depressive disorder (MDD).
Method: 3273 patients who met the diagnostic criteria of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) MDD were recruited from 16 general hospitals and 16 mental health centers in China. Physicians and patients completed complementary customized depression disorder symptomatology questionnaires assessing the clinical characteristics of patients with MDD.
Result: 1. In this study we analyzed physician-recorded data. The major somatic symptoms in patients with MDD in China were insomnia (64.6%), pre-verbal physical complaints (46.9%), weight loss (38.5%), low appetite (37.6%), circulatory system complaints (31.3%), headache (31.3%), hyposexuality (31.0%), gastrointestinal symptom complaints (29.6%), and respiratory system complaints (29.6%). 2. Compared with MDD patients who sought medical help from mental health centers, MDD patients who sought medical help from general hospitals were more likely to suffer from urinary system complaints, headache, sensory system complaints, trunk pain, and nervous system complaints. A lower prevalence rate of insomnia and hyposexuality was also observed among MDD patients who visited general hospitals ($p < .05$). 3. Patients aged from 40 to 54 had the highest probability of pre-verbal physical complaints, respiratory system complaints, trunk pain, hyposexuality, limb pain and other pain conditions, while patients over 55 years of age had the lowest prevalence respiratory system complaints, hyposexuality, and other pain conditions, and they also had the highest rate of low appetite and insomnia. 4. Female patients appeared to exhibit higher rates of pre-verbal physical complaints, low appetite, and insomnia than male patients, but had fewer urinary systems complaints than male patients ($p < .05$).
Conclusion: The major somatic symptoms in patients with MDD in China are insomnia, pre-verbal physical complaints, weight loss, low appetite, circulatory system complaints, headache, hyposexuality, gastrointestinal system complaints, and respiratory system complaints. These symptoms vary by the type of medical setting to which patients present, and well as by age, and gender.

Currently, the prevalence rate of MDD is 4.4% worldwide [1] and 3.02% in China [2]. According to the World Health Organization (WHO), MDD ranks third in the list of burden of disease. By 2020, it is expected to be the second heaviest burden after heart disease [3], and by 2030, it will account for the biggest portion of the global disease burden [4]. In China, due to the limited mental health resources and the social stigma associated with mental illness, many MDD patients with somatic symptoms such as stomachache or headache choose to visit general hospitals and this leads to missed diagnosis of their depression, and consequently missed opportunities for appropriate treatment [2].

In 1983, Wilson suggested that though somatic symptoms were not regarded as clinical diagnostic criteria of MDD, such symptoms both preceded and pararalled MDD in patients presenting at a family practice most of time [5]. In line with this, a systematic review of 70 studies conducted in European countries found a high comorbidity between painful physical symptoms and depressive symptoms in three populations:

☆ Funding: The National Key Research and Development Program of China 2016YFC1307100, 2016YFC0906400; Shanghai Jiao Tong University Foundation YG2015MS47; Shanghai Hospital Development Center Foundations SHDC12015131, SHDC12015302; The National Natural Science Foundation of China 81571327.
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https://doi.org/10.1016/j.comppsych.2018.08.013
0010-440X/

general populations, patients presenting to their general practitioner (GP), and patients treated at specialist pain clinics or psychiatric clinics. In many studies patients with MDD were reported to have presented for treatment because of somatic complaints rather than depression [6]. Over half of depressed patients experienced painful somatic symptoms, and somatic symptoms associated with depressive and anxious symptoms [7]. In China, where people tend to express physical discomfort instead of admitting to having depression symptoms [8,9], research has also revealed that over half of MDD patients believe that they have physical diseases rather than a mental illness [10]. Similarly, other research across 14 countries and 15 primary health care centers has shown that between 45 and 90% of MDD patients complained mainly about their somatic symptoms, indicating that somatic symptoms may be a core component of the clinical features of MDD [11].

Given that somatic symptoms seem to be often comorbid with MDD and the major focus of patients, somatization might be an early symptom of MDD, and an effective indicator for early diagnosis of MDD [12]. Research suggests that the severity of somatic symptoms is the most powerful indicator of MDD patients' prognosis [13]. A prospective study of 909 Chinese MDD patients found a positive correlation between somatic symptoms and severity of depression symptoms, while a negative correlation between somatic symptoms and remission rate has also been observed [14]. Somatic symptoms play a key role in emotion and decision-making process in MDD. However, to date, somatic symptoms have not been carefully studied in relation to the clinical diagnosis and treatment of MDD [15]. A research showed that Chinese people were more likely to consider some psychological symptoms such as “thinking life is not worth living” as the typical features for people with depression, rather than somatic features such as “sleep disturbance” [16]. It indicated that the somatic symptoms varied in MDD [17]. To analyze the clinical features of somatic symptoms of MDD patients, our study utilized data gathered in an epidemiological survey of major depression disorder in Chinese mental health centers and general hospitals conducted in 2014.

1. Subjects and method

1.1. Subjects

From August 2014 to February 2015, 3516 patients were recruited from 16 psychiatric hospitals and 16 general hospitals across 7 administrative areas in mainland China. Approvals were gained from the ethics committee of each site, and all the patients signed consent forms.

1.2. Inclusion and exclusion criteria

Inclusion criteria: (a) Age ≥ 16; (b) meeting the DSM-IV TR diagnostic criteria for MDD; (c) condition not well-controlled (HRSD reduction rate ≤ 50%) after maximum dose of antidepressants and full course of treatment (≤8 weeks). Exclusion criteria: (a) patients with suicide risks; (b) bipolar disorder; (c) patients who had received Modified Electra convulsive Therapy (MECT) treatment within one month; (d) females in pregnancy and/or lactating period.

1.3. Evaluation measures

The National Survey on Symptomatology of Depression (NSSD) was designed to explore the severity of symptoms of MDD across a widespread symptomatology within and outside DSM framework. Due to the combined meaning of some diagnostic criteria, we divided a total of 9 sets of DSM symptoms into 20 separate items. Other 44 symptoms covered somatic, emotional, cognitive, anxious, interpersonal and other domains of MDD. Symptoms in other domains included diurnal changes, self-harm behavior, psychotic symptoms, as well as culture-specific symptoms like centrality of sleeplessness, distress of social disharmony and pre-verbal physical complaints, which are common complaints by MDD in Chinese clinics and have been found to be significant in previous reports and being focused strongly by patients [18]. Because of the high prevalence of anxious depression in Chinese MDD patients [19,20] and high tendency to express somatic symptoms than psychological symptoms [9,21,22], we emphasized the assessment on anxious and somatic symptoms. The somatic symptoms included, besides diagnostic symptoms like changes in appetite, sleeping problems, weight loss, painful physical symptoms.

The NSSD was constructed based on the following materials. (a) Diagnostic criteria: The DSM-IV, International Classification of diseases (ICD-10), and the Chinese Classification of Mental Disorders, 3rd version (CCMD-3). (b) Depression and anxiety rating scales like Montgomery-Asberg Depression Rating Scale (MADRS), Hamilton Rating Scale for Depression (HRSD), Quick Inventory of Depressive Symptomatology (QIDS), the Patient Health Questionnaires (PHQ-9 and PHQ-15), Hamilton Anxiety Scale (HAMA), Self-Rating Depression Scale (SDS), and Self-Rating Anxiety Scale (SAS). According to previous researches, those all have good reliability and validity among Chinese populations [23–26]. (c) Various of literatures examining classic description and clinical manifestation of MDD from Chinese textbooks, which represent views of Chinese top experts' on the important symptoms and signs of depression, as well as English textbooks (e.g., The American Psychiatric Publishing Textbook of Psychiatry, fifth edition) with Chinese translation. The symptoms of NSSD were discussed by a consultant group composed of 10 psychiatrists who have extensive expertise in psychiatric clinics and researches on depression in China. An article on clinical characteristics associated with therapeutic nonadherence of depression patients using NSSD was already published [27].

Each version of the questionnaire assesses 16 somatic symptoms: (1) Pre-verbal physical complaints; (2) Respiratory system complaints, including shortness of breath, suffocation, and respiratory distress; (3) Circulation system complaints, including chest tightness, flustered symptoms, and feeling of vessel beat; (4) Low appetite; (5) Urinary system complaints, including frequent urination and urgent urination; (6) Insomnia; (7) Limb pain; (8) Gastrointestinal system complaints, including discomfort in stomach and intestines; (9) Trunk pain; (10) Weight loss; (11) Headache; (12) Sensory system complaints, including allergy, skin chill, skin fever or skin discomfort; (13) Nervous system complaints, including dizziness, tinnitus, and sweating; (14) Hyposexuality; (15) Muscular system complaints, including muscular tightness, aches and twitching; (16) Other pain conditions.

Weight reduction was divided into two levels (1 = yes, 2 = not at all). Other symptoms are divided into 4 levels: 1 = not at all, 2 = few time, 3 = most time, 4 = almost every day.

Evaluators of the questionnaire (physician version) were required to be registered physicians. The questionnaire (patient version) was filled in independently according to the patient's subjective feelings. In this paper we report on the analyses of physician questionnaire data.

1.4. Statistical analysis

SPSS23 was used for analyses of the NSSD questionnaire (physician version) data. Responses 1 and 2 (not at all and few time) were considered as asymptomatic, whereas 3 and 4 (most time and almost everyday) were taken as symptomatic. Fisher's z test of proportions and chi-square tests were used to examine associations among categorical data.

2. Results

2.1. Demographic data

We recruited 3516 patients with MDD, but data from 243 were not included in the analyses because their questionnaires were not