Brief report

Demographic and clinical differences between early- and late-onset major depressions in thirteen psychiatric institutions in China

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ABSTRACT

Background: Little is known about the demographic and clinical differences between early- and late-onset depressions (EOD and LOD, respectively) in Chinese patients. This study examined the demographic and clinical profile of EOD ($ < =25$ years) compared to LOD ($ > 25$ years) in China.
Methods: A consecutively recruited sample of 1178 patients with MDD was assessed in 13 psychiatric hospitals or psychiatric units of general hospitals in China nationwide. The cross-sectional data of patients' demographic and clinical characteristics and prescriptions of psychotropic drugs including antidepressants, mood stabilizers, antipsychotics and benzodiazepines were recorded using a standardized protocol and data collection procedure.
Results: Two hundred and seventy five (23.3%) of the 1178 patients fulfilled criteria for EOD. In multiple logistic regression analyses, compared to LOD patients their EOD counterparts were more likely to be unmarried and unemployed, had more atypical and psychotic depressive episodes, had bipolar features, while they had more lifetime depressive episodes.
Conclusions: The demographic and more severe clinical features of EOD in Chinese patients were basically consistent with those found in Western populations. The association between socio-cultural factors and development of EOD warrants further studies.

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1. Introduction

In the past decades the relationships between major depressive disorders (MDD) and age at onset have been extensively studied with most research conducted in Western countries (Landsbergis et al., 2000; Landsbergis et al., 1992). Consistently reported findings include that persons with early-onset depression (EOD)

could be differentiated from late-onset depression (LOD) by more frequent, recurrent and longer episodes, irritability, depressive and anxiety symptoms, more suicidality, more Axis I psychiatric comorbidity and family history, poorer psychosocial outcome and greater genetic loading (Garrosa et al., 2008; Li and Liu, 2000; Zisook et al., 2004). However, MDD is a heterogeneous disorder that is possibly influenced by a host of biological and socio-cultural factors, therefore findings obtained in the Western settings patients may not be inapplicable to other ethnic groups (Schotte et al., 2006). It has been reported that Western diagnostic systems and research findings do not cover the full range of mood symptoms experienced by Chinese patients (Kleinman, 2004; Lee et al., 2007). Therefore, it is necessary to examine the demographic and clinical differences between EOD and LOD in Chinese MDD patients.

In a recent study Yang et al. (2011) interviewed 1970 Chinese women with MDD diagnosed by the Composite International Diagnostic Interview (CIDI) and found that in contrast to LOD, EOD patients presented with more suicidal ideation and attempts, were more likely to have a chronic course, more family history, a greater familial loading and more comorbidities with anxiety disorders. However, major weaknesses of this study included convenience sampling and inclusion of only female patients that limit the generalization of the findings. In addition, the use of psychotropic drugs in EOD/LOD was not examined; in fact, this aspect has seldom been reported in the literature.

In order to improve the validity of diagnosis of bipolar disorders and rationalize its treatment, the Chinese Society of Psychiatry Unit of Mood Disorders initiated a nationwide study entitled as a Diagnostic Assessment Service for People with Bipolar Disorders in China (DASP) that aimed to test the usefulness of screening tools for BD in patients initially diagnosed as MDD. The current study, a secondary analysis of the data on MDD of the DASP project, set out to compare the demographic and clinical features and prescribe patterns of antidepressants, mood stabilizers, antipsychotics and benzodiazepines between EOD and LOD.

2. Methods

2.1. Study participants and settings

The first DASP survey was conducted in 13 major psychiatric hospitals/units located in north, south, east, west and central parts of China representing a range of clinical settings from September 1, 2010 through February 28, 2011. Patients were screened and enrolled if they were aged between 16 and 65 years, were inpatients or outpatients, had a diagnosis of DSM-IV MDD established by the Chinese version of the Mini International Neuropsychiatric Interview (MINI), Version 5.0 (Sheehan et al., 1998; Si et al., 2009), understood the aims of the study and the contents of the clinical interview and provided informed consent. Exclusion criteria included past diagnosis of BD; history or ongoing significant medical or neurological condition(s); depressive disorders secondary to a general medical or neurological condition.

2.2. Instrument and assessment procedure

Patients with a diagnosis of MDD receiving treatment in the participating hospitals/units were consecutively referred by their treating psychiatrists to the research team to be screened for eligibility. Patients fulfilling the above entry criteria were invited to participate in the study.

The patients' basic demographic and clinical data were collected with a form designed for the study in the course of a clinical interview supplemented by a review of their medical records.

Following earlier studies (Akerstedt et al., 2002; Moore et al., 2002), 25-year was used as the cutoff point for age to differentiate EOD (< =25 years) and LOD (25 years) in this study. According to the clinical traditions in China, the Mood Disorder Unit of the Chinese Society of Psychiatry also recommended 25 years as the cutoff point for EOD and LOD.

The Mood Disorders Questionnaire (MDQ) is a self-reported questionnaire used to screen lifetime mania and hypomania (Hirschfeld et al., 2000). It consists of 13 'yes'/'no' questions reflecting the DSM-IV inclusion criteria followed by a single 'yes'/'no' question about whether the symptoms clustered simultaneously. The final question evaluates the level of impairment resulting from the symptoms based on a 4-point scale ('no problem', 'minor problem', 'moderate problem' and 'serious problem'). In the initial validation study, a positive case required the concurrent presence of seven or more symptoms resulting in moderate or severe impairment (Hirschfeld et al., 2000). The Chinese version of the MDQ has been validated in China; patients with a total score of 5 or higher were identified as having bipolar features (Yang et al., 2011).

Prior to the study, all 13 raters were trained in the use of MINI in 20 patients with psychiatric disorders. In this reliability exercise, the kappa values of their judgments on MDD were more than 0.80 for each rater.

The study protocol was approved centrally by the Clinical Research Ethics Committee of Beijing Anding Hospital, Capital Medical University, China and the Clinical Research Ethics Committees of the respective study centers.

2.3. Statistical analysis

The data were analyzed using SPSS 20.0 for Windows. Comparison of the socio-demographic and clinical characteristics of the EOD and LOD patients groups was made using the independent sample t-test, Mann–Whitney U test, and chi-square test, as appropriate. The association between onset age and categorical variables of interest (gender, marital status, employment, education, atypical depressive episodes, depressive episodes with suicidal ideation and/or attempts, psychotic depressive episodes, depressive episodes following stressful life events, seasonal depressive episodes, family history of psychiatric disorders, depressive episodes with bipolar features and use of psychotropic drugs) was examined using logistic regression separately adjusting for potential confounding variables which had been significantly associated with onset age in the above univariate analyses. The association between onset age and continuous variables (lifetime depressive episodes and number of admissions) was examined with analysis of covariance (ANCOVA) adjusting for potential confounding variables. The one-sample Kolmogorov–Smirnov test was used to check the normality of the distribution of the continuous variables, with the level of significance set at 0.05 (two-tailed) due to the exploratory nature of the analyses.

3. Results

A total of 1757 patients were invited to participate in the study; 270 (15.4%) refused; 309 (17.6%) fulfilled DSM-IV criteria for BD. The 1178 (67.0%) patients who met criteria for MDD were included for the analyses. Table 1 presents the basic demographic and clinical characteristics and the use of psychotropic drugs for the whole sample and separately for EOD and LOD. In univariate analyses, compared to the LOD patients, the EOD patients were more likely to be male, younger, unmarried, unemployed and received high education, had more seasonal, atypical and psychotic depressive episodes and more bipolar features, while they were