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Brief report

Differential interactions between comorbid anxiety disorders and substance use disorder in rapid cycling bipolar I or II disorder

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Abstract

Objective: Anxiety disorders (AD) and substance use disorders (SUD) commonly co-occur with bipolar disorder. This study was undertaken to assess AD-SUD-bipolar subtype interactions.

Methods: Extensive clinical interview and MINI were used to ascertain DSM-IV diagnoses of rapid cycling bipolar I (RCBPDI) or II (RCBPDII) disorder, SUDs, and ADs including generalized anxiety disorder (GAD), panic disorder (PD), and obsessive-compulsive disorder (OCD). Data at the initial assessment of four studies was used to compare the prevalence differences in ADs between RCBPDI and RCBPDII by using protocol-defined SUD categories, "Never," "Lifetime, but not recent," or "Recent."

Results: Five-hundred sixty-six of 568 patients (RCBPDI $n=320$, RCBPDII $n=246$) were eligible for analyses. In the "Never" group ($n=191$), patients with RCBPDI and RCBPDII had similar risk for ADs. In the "Lifetime, but not recent" group ($n=195$), RCBPDI patients had significantly higher risks for GAD (OR=3.29), PD (OR=2.95), but not OCD, compared with their RCBPDII counterparts. Similarly, in the "Recent" group ($n=180$), RCBPDI patients also had significantly higher risks for GAD (OR=3.6), PD (OR=3.8), but not OCD, compared with their RCBPDII counterparts.

Limitations: Data were cross-sectional and not all ADs were included.

Conclusion: In this large cohort of patients with rapid cycling bipolar disorder, risk for having GAD, PD, but not OCD increased significantly in patients with bipolar I disorder compared to their bipolar II counterparts when a history of SUD was present. However, there were no significant differences in the risk for GAD, PD, or OCD between the subtypes among patients without a history of SUD.

Keywords: Rapid cycling bipolar disorder; Anxiety disorder; Substance use disorder; Comorbidity; Interaction

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1. Introduction

Epidemiologic studies have shown that anxiety disorders (AD) and substance use disorders (SUD) are the most commonly comorbid conditions in bipolar disorder (BPD) (Grant et al., 2005; Kessler et al., 1997; Regier et al., 1990). For example, in the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), Grant and colleagues (Grant et al., 2005) found that in patients with BPDI ($n=1411$), 56% had at least one lifetime AD; 58% had a lifetime history of alcohol use disorders; and 38% had lifetime drug use disorders. There is growing recognition that both AD and SUD frequently co-occur together in individuals with BPD (Bauer et al., 2005; Kolodziej et al., 2005; Levander et al., 2007; Simon et al., 2004). How these comorbid conditions are related in terms of prevalence, etiology, and effects on the course of each illness, however, remains unclear.

Of particular importance to our understanding of these complex comorbidities is the fact that within each of these disorders are diagnostic subtypes that differ in prevalence, clinical characteristics, and treatment responsiveness. It is not well understood whether different subtypes of BPD, AD, or SUD are more likely to co-occur with each other. In a study from the Stanley Foundation Bipolar Network (SFBN), Levander et al. (2007) reported that patients with BPDI and a lifetime alcohol use disorder had significantly lower rates of specific phobia and obsessive-compulsive disorder (OCD) than those without a history of alcohol use disorder. However, comparison of bipolar subtypes was not performed. Other studies have compared the rate differences of ADs or SUDs according to bipolar subtypes (Bauer et al., 2005; Boylan et al., 2004; Chengappa et al., 2000; Judd et al., 2003; Kolodziej et al., 2005; McElroy et al., 2001; Rihmer et al., 2001; Simon et al., 2004), but none assessed the interactions. Therefore, we proposed to analyze data from a cross-sectional dataset of a cohort of patients with rapid cycling bipolar I (RCBPDI) or II (RCBPDII) disorder to investigate the AD-SUD-bipolar subtype interactions.

2. Methods

2.1. Patient population

Data at the initial assessment of a cohort of patients with RCBD who were recruited for three NIMH (Study I, II, and III)-and one Stanley Medical Research Institute (Study IV) — funded, randomized, double-blind, placebo-controlled clinical trials were used for this study. The study designs, study index, inclusion and exclusion criteria, and stages of the four studies at the time of this analysis are summarized in Table 1. A "recent" SUD was defined as having a diagnosis of substance dependence and continuing to meet abuse or dependence criteria for a substance(s) in the last 6 months at the initial assessment or having a diagnosis of substance abuse and continuing to abuse a substance(s) in last the last 3 months (-Study IV) or 6 months (Study III). Subjects were referred from specialty clinics, private and public mental health centers, and advertisements. The respective institutional review board approval was obtained and patients provided written, informed consent for each study. Data of patients enrolled up to June 2005 were analyzed.

2.2. Initial assessments

Diagnoses of RCBD, ADs including GAD, PD, and OCD, and SUDs were ascertained by extensive clinical interview (ECI) alone for the first 391 patients by an experienced research psychiatrist (JRC) (Calabrese et al., 2005) and with the Mini-International Neuropsychiatric Interview (MINI) (Sheehan et al., 1998) for the remaining subjects by research psychiatrists and research assistants. The detailed procedures have been described elsewhere (Gao et al., 2008). Briefly, the ECI not only consists of questions and criteria for the diagnosis of DSM-IV Axis I disorders, but also contains items to assess mental status, severity of suicidality, demographics, and other variables of interest. The ECI and the MINI combination typically included a 60–90-minute initial interview followed by a 30–45 min second evaluation by a research psychiatrist and administration of the MINI by a certified research assistant. If any inconsistency occurred with the first and second evaluations during the MINI administration, a psychiatrist would re-evaluate the patient. Collateral information from the mandatory presence of significant other(s) of patients was required in all cases during the initial assessment. A lifetime history of AD was defined as meeting anxiety disorder criteria prior to or at the time of initial assessment. A lifetime history of SUD was defined as meeting substance abuse or dependence criteria prior to or at the initial assessment.

2.3. Procedures

Over-representation of male patients in the "recent" SUD studies was observed, but the mean age and race in the four studies were similar. In order to further minimize the heterogeneity, we divided patients into three groups according to the history of SUD, "Never," "Lifetime, but not recent," and "Recent." The "Never" group was defined as those who never had a diagnosis of SUD at the initial