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Research report

Association of psychosis with suicidality in pediatric bipolar I, II and bipolar NOS patients

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Abstract

Background: Psychosis in pediatric mood disorder patients may be related to suicidal ideation. Bipolar (BP) adolescents are at high risk of completed suicide. We examined whether pediatric BP patients with psychosis have a higher prevalence of suicidality than non-psychotic BP patients. Based on previous findings in adult BP patients, we predicted that pediatric BP patients with psychotic symptoms would have higher prevalence of suicidality, higher occurrence of lifetime psychiatric hospitalizations and worse current Global Assessment of Functioning Scale (GAF) scores compared to non-psychotic BP patients.

Methods: We studied 43 BP children and adolescents (mean age ± S.D = 11.2 ± 2.8 y, range = 8–17) who did ($n = 17$) or did not have ($n = 26$) a lifetime history of psychotic symptoms. Indicators of suicidality (thoughts of death and suicidal ideation, plans, and attempts), psychiatric diagnoses, psychotic symptoms, psychiatric hospitalizations and GAF scores were assessed with the K-SADS-PL interview.

Limitations: Small sample size, cross-sectional study and exclusion of substance abuse comorbidity.

Results: Pediatric BP patients with a lifetime history of psychotic symptoms compared to BP patients without psychosis were more likely to have thoughts of death (100% versus 69.2%, $p = 0.01$), suicidal ideation (94.1% versus 42.3%, $p = 0.001$) and suicidal plans (64.7% versus 15.4%, $p = 0.002$). Occurrence of psychiatric hospitalization was higher in psychotic BP patients compared to non-psychotic BP patients (82.4% versus 46.2%, $p = 0.018$).

Conclusions: Psychotic symptoms in pediatric BP patients are associated with suicidal ideation and plans, and psychiatric hospitalizations. Psychotic symptoms are a risk factor for suicidality amongst pediatric BP patients.

Keywords: Bipolar disorder; Psychosis; Suicide; Children; Adolescents; Hospitalization

1. Introduction

Bipolar (BP) disorder is a chronic mental illness affecting 1–3% of the USA population (Baldessarini

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and Tondo, 2003). Completed suicide occurs in 15% to 20% of adult BP patients (Goodwin and Jamison, 1990), where it is 20 times more frequent than in the general population (Tondo et al., 2003).

Onset of BP disorder before 18 years of age is associated with suicidal ideation and attempts (Carter et al., 2003; Slama et al., 2004). Adolescents with BP disorder have a higher risk of completed suicide compared to adolescents with other psychiatric disorders (Geller et al., 1998; Tondo and Baldessarini, 2000; Sanchez and Le, 2001), and more than 25% of prepubertal BP patients develop a suicidal plan (Geller et al., 1998). Children and adolescents with major depression who have cyclothymic temperament present an increased risk of suicidal ideation (odds ratio: 7.4) and of suicidal attempt (odds ratio: 10.5) compared to depressed children without cyclothymic temperament (Kochman et al., 2005).

The prediction and prevention of suicide is one of the most difficult and important problems the psychiatrist faces. The identified risk factors for completing suicide in adult BP patients are early age at onset, psychosis, rapid cycling, mixed mania, antidepressant-induced mania, total number of previous depressive episodes, high rates of co-morbidities and alcohol/substance abuse (Sanchez and Le, 2001; Slama et al., 2004). All these factors often are present in pediatric BP patients early in the course of their illness (Carlson et al., 2000; Geller et al., 2000), but it is not known whether these factors also predict suicidal behaviors in pediatric patients.

The focus of this analysis is on one of these potential suicidality risk factors, namely psychosis. Psychosis in adult BP patients is associated with a higher prevalence of suicidal ideation (Sanchez and Le, 2001). Also, mood-incongruent psychotic features in BP patients predict worse outcome and worse social functioning compared to non-psychotic BP patients (Strakowski et al., 2000). It is noteworthy that BP adolescents have a higher prevalence of psychosis than BP adults (Sanchez et al., 1999). Approximately 30% of BP children and adolescents have psychotic symptoms (Biederman et al., 2005).

We studied the relationship between the occurrence of psychotic symptoms and suicidality in pediatric BP patients. We hypothesized that psychotic BP patients would have a higher occurrence of suicidality than non-psychotic patients. In addition, we hypothesized that pediatric BP patients with psychotic symptoms would have higher occurrence of lifetime psychiatric hospitalization and worse social functioning (as indexed by Global Assessment of Functioning Scale (GAF) scores) compared to non-psychotic BP patients.

2. Methods and materials

We studied 43 pediatric BP patients (mean age ± S.D = 11.2 ± 2.8 y, range = 8–17 y; 25 BP type I, 3 BP II, 14 BP not otherwise specified (NOS)) who were participants in a neuroimaging study (Caetano et al., 2004). Patients were diagnosed as BP NOS if they had clear manic or hypomanic episodes but these episodes lacked the duration needed to be classified as BP I or BP II. Demographic and clinical characteristics of the sample are presented in Table 1. Subjects were referred by psychiatrists or recruited directly through advertisements and flyers distributed in the community. Most of the patients were recruited from outpatient settings. Inclusion criteria were: a DSM-IV diagnosis of BP disorder, and age between 8–17 y. Exclusion criteria were: substance abuse within the past 6 months, serious medical problems, head injury with loss of consciousness, and metallic objects in the body.

Psychiatric diagnoses, as well as thoughts of death, suicidal ideation, plans, attempts and psychotic symptoms were assessed by a trained rater (S.C.C.) using the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL) interview (Kaufman et al., 1997), interviewing both the parent or legal guardian and the child. Inter-rater reliability was demonstrated by achieving 100% agreement with a child psychiatrist on five consecutive cases. All interviews were reviewed by a board-certified child psychiatrist (R.L.O.).

We also assessed history of psychiatric hospitalizations and social functioning using the Global Assessment of Functioning Scale (GAF) scores.

All subjects assented to participate in the study, and their parents or legal guardians gave written informed consent after the study was fully explained. This research project was approved by the Institutional Review Board of The University of Texas Health Science Center at San Antonio.

2.1. Statistical analyses

Statistical analyses were performed with the SPSS for Windows software version 12 (SPSS Inc., Chicago, IL), and a 2-tailed significance level of $p < 0.05$ was set. Psychotic and non-psychotic BP patients were compared by means of Chi-square tests for dichotomous variables, and *t*-tests or Mann Whitney