**Glucose abnormalities in newly diagnosed, medication-naive patients with bipolar disorder, mania, and psychosis**

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**BACKGROUND**

Bipolar disorder is a severe mental illness associated with functional disability (1). Bipolar disorder is also associated with increased medical morbidity and mortality (2). An increased suicide rate, poor healthcare access, poor health habits and medication side-effects contribute to the increased morbidity and mortality. The leading contributor to the excess mortality is cardiovascular disease (3). The prevalence of T2DM in bipolar disorders ranges from 8 to 17% a threefold increase compared to the general population (4). Pharmacological treatment, including both antipsychotic agents and mood stabilizers, may confound this relationship (5). Although the biochemical mechanisms that underlie psychiatric disorders are far from being understood, several lines of evidence suggest that affective disorders (6) and psychotic disorders are highly correlated with glucose abnormalities (7). The aim of the letter is to test the hypothesis that drug-naïve bipolar patients have abnormal glucose tolerance compared to matched control subjects.

**MATERIAL AND METHODS**

7 Drug-naïve patients with DSM-IV bipolar I disorder and matched controls underwent a two hour glucose tolerance test. All subjects gave informed consent for participation in the study, which was conducted under the supervision of the authors’ respective hospital ethics committees, and came from a larger study of metabolic abnormalities and glucose dysregulation in neuropsychiatric disorders (8) in which material and methods were explained.

**RESULTS**

The two groups were very similar with regard to demographics, socioeconomic status, cortisol, BMI and smoking Table. The bipolar patients had a mean glucose of 2H2G value compared with matched controls (respectively mean ±SD [SD] of 145.9 [16.9] vs. 84.8 [27.8]; p<0.001;Table). 2HG values were not correlated with severity of psychosis, either Reality Distortion (adding PANSS items 1 and 3) (p=0.902) or Conceptual Disorganization (PANSS item 2) (p=0.361).

**DISCUSSION**

We found that newly diagnosed, medication-naive patients with bipolar disorder, manic, with psychiatric features had higher 2HG concentrations than did matched control subjects. These differences could not be attributed to confounding by BMI, gender, age, psychotropic medications, cortisol concentration, socioeconomic status, ethnicity, smoking or drugs that affect glucose tolerance.

This small preliminary study suggests that glucose abnormalities are linked to the diagnosis of bipolar I disorder before the effects of medications and other confounders had taken place. Should an association between bipolar disorder and glucose intolerance be confirmed, this might occur because diabetes and bipolar disorder share some common risk factors and/or genetics.

Birth and gestational problems appear to be risk factors for both problems. Our results are consistent with the proposals that bipolar disorder is a multi-systemic disease (12) or a syndrome of accelerated aging (13), and with the concept of allostatic load as applied to bipolar illness (14)

**BIBLIOGRAPHY**


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