Available online at www.sciencedirect.com
ScienceDirect
Psychiatry Research 159 (2008) 1–6
PSYCHIATRY RESEARCH
www.elsevier.com/locate/psychres

Affective lability and affect intensity as core dimensions of bipolar disorders during euthymic period

Chantal Henry [a,b,*], Donatienne Van den Bulke [a,b], Frank Bellivier [c,d], Isabelle Roy [c], Joël Swendsen [b], Katia M'Baïlara [a,b], Larry J. Siever [e], Marion Leboyer [c,d]

[a] *Département de Psychiatrie adulte, Bâtiment Lescure, CHS Charles Perrens, 121 rue de la Béchade, 33076 Bordeaux Cedex, France*
[b] *Département de Psychologie, Université de Bordeaux 2, 3 ter, Place de la Victoire, 33076 Bordeaux, France*
[c] *Service Universitaire de Psychiatrie Adulte, Hôpital Henri Mondor, AP-HP, 51, avenue du Mal de Lattre de Tassigny, F-94010 Créteil Cedex, France*
[d] *INSERM U-513 'Neurobiologie et Psychiatrie', Faculté de Médecine de Créteil, 8 rue du Général Sarrail, 94010 Créteil Cedex, France*
[e] *The e Bronx VA Medical Center, 116A, 130 West Kingsbridge Road, Bronx, NY 10468, USA*

Received 21 January 2005; received in revised form 17 September 2005; accepted 8 November 2005

Abstract

Bipolar disorders are usually defined by alternative mood states, but a more precise characterization of the euthymic period could provide further insights into the pathophysiology of bipolar disorders. Surprisingly, few studies have investigated core affective dimensions in euthymic bipolar patients. In this study, we assessed 179 euthymic bipolar patients (score < 12 on the Montgomery-Åsberg Depression Scale and a score < 6 on the Bech–Rafaelsen Mania Scale) compared with 86 control subjects using French versions of the Affective Lability Scale (ALS) and the Affect Intensity Measure (AIM). Data were analyzed by logistic regression. Our results showed that euthymic bipolar subjects reported having more intense emotions than controls and also had a higher affective lability. High scores in both affective dimensions were associated with a significantly higher risk for psychiatric axis I comorbidity. Moreover, a high affective lability score was associated with an earlier age of onset for bipolar disease. Affective lability and affect intensity might be two core dimensions of bipolar disorder during euthymic periods, suggesting that bipolar disorder is not circumscribed to mood episodes but also affects emotional reactivity between episodes. Both dimensions could account for the stress reactivity of bipolar patients that may lead to relapses.

Keywords: Bipolar disorder; Affective lability; Affect intensity; Subclinical mood disturbance; Endophenotypes; Emotional reactivity; Mood stabilizers

1. Introduction

In current classifications, bipolar disorders are only defined by the presence of thymic episodes without considering the euthymic period. Many studies have investigated this period using the notion of temperament leading to suggestions of new definitions of bipolar disorders. At present, a categorical approach, based on

* Corresponding author. Hôpital Charles Perrens, Bâtiment Lescure, 121 rue de la Béchade, 33076 Bordeaux Cédex, France. Tel.: +33 5 56 56 34 50; fax: +33 5 56 56 35 47.
E-mail address: chenry@ch-perrens.fr (C. Henry).

0165-1781/$ - see front matter © 2007 Elsevier Ireland Ltd. All rights reserved.
doi:10.1016/j.psychres.2005.11.016

assessment of personality or temperament, is favored (Akiskal et al., 1995, 2005; Perugi et al., 2003). Another approach could involve exploring the euthymic period using dimensions instead of multiple and complex personality traits (Siever and Davis, 1991). A core dimension or a vulnerability marker is supposed to reduce complex behaviors into their component parts. This approach could be useful in determining the genetic vulnerability of a disease (Lenox et al., 2002).

Davidson (1998) suggested that the threshold required for a discrete stimulus to evoke an emotional response can differ between individuals. Highly reactive subjects might respond to minor stimuli, whereas less reactive subjects might not react at all. The amplitude of the response might also differ from individual to individual. Leibenluft et al. (2003) suggested that early-onset bipolar patients are more responsive to both positive and negative emotional stimuli than older patients. Finally, studies using multiple trait personality tests have shown that bipolar patients have higher emotional instability scores than controls (Hirschfeld et al., 1986; Solomon et al., 1996), but few studies have looked at specific affective dimensions in bipolar patients (Henry et al., 2001).

We hypothesize that one of the core abnormalities observed in bipolar patients is a hyper-reactivity to environmental stimuli, leading to affective lability and high affect intensity. Affective lability can be defined as a predisposition to marked, rapidly reversible shifts in affective states, extremely sensitive to meaningful environmental events that might induce more modest emotional responses in normal individuals (Siever and Davis, 1991). Intensity of affect, regardless of hedonic tone, refers to individual differences in characteristic emotional arousability or affective reactivity and is considered to be a stable individual difference dimension (Larsen et al., 1986).

We previously (Henry et al., 2001) compared affective lability, affect intensity and impulsivity core dimensions in bipolar type II patients, borderline patients and patients with other personality disorders. We found that bipolar and borderline patients had higher emotional lability scores. However, that study included only a few bipolar patients and they were only type II.

The aim of this study was to investigate for the first time affective lability and affect intensity by comparing euthymic bipolar patients type I and II and control subjects, using self-rating scales. We hypothesized that 1) bipolar patients would show increased reactivity to emotional stimuli during the euthymic period; and that 2) such affective dimensions would be associated with the severity of bipolar disorder.

2. Methods

2.1. Subjects

Bipolar patients were recruited from two psychiatric hospitals (Paris and Bordeaux, France). The study was described in detail to the patients, and written informed consent was obtained from all participants. The control group was composed of blood donors with no personal or familial history of affective disorders or suicide attempts. Both patients and control subjects were interviewed using the French version of the Diagnostic Interview for Genetic Studies (DIGS; Nurnberger et al., 1994). This provides DSM-IV diagnoses and clinical history of psychiatric disorders. Only euthymic patients were included. Euthymic state was defined by a clinical examination by the treating psychiatrist and confirmed by 1) a score <12 on the Montgomery-Åsberg Depression Scale (Montgomery and Åsberg, 1979) and a score <6 on the Bech Mania Scale (Bech et al., 1978), and by 2) not meeting the DSM-IV criteria for depressive, manic, hypomanic or mixed states. The Bech Mania Scale is an 11-item semi-structured standard manic state examination. The score for each item varies from 0 to 4. The total score ranges from 0 (no manic symptoms) to 44 (severe manic symptoms). Patients with scores below 6 are considered euthymic. For inpatients, affective dimensions could be assessed after discharge when patients were asymptomatic. Patients who did not meet remission criteria were excluded from the study.

2.2. Dimensional assessments

Participants in both groups completed the French version of the Affective Lability Scale (ALS), (Harvey et al., 1989). This is a 54-item self-report scale that measures lability of affect. ALS items assess the subjects' perceptions of their ability to shift from what they consider to be their normal (euthymic) mood to affects of anger, depression, elation and anxiety. They also assess their tendency to oscillate between states of depression and elation, and between states of anxiety and depression. Each item is rated on a 4-point scale, from "very uncharacteristic" to "very characteristic" of themselves. The total ALS score is the mean of the six individual affect shifts subscales.

Each subject also completed the Affect Intensity Measure (AIM; Larsen and Diener, 1985; Larsen et al., 1986; Flett et al., 1988), a self-report scale consisting of 40 items. Affect intensity refers to individual differences in the intensity of response to a given level of emotion-provoking stimulation. The items include statements