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Original article

Clinical and dimensional characteristics of euthymic bipolar patients with or without suicidal behavior

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ABSTRACT

Background. – The clinical and dimensional features associated with suicidal behaviour in bipolar patients during euthymic states are not well characterised.
Methods. – In a sample of 652 euthymic bipolar patients, we assessed clinical features with the Diagnostic Interview for Genetics Studies (DIGS) and dimensional characteristics with questionnaires measuring impulsivity/hostility and affective lability/intensity. Bipolar patients with and without suicidal behaviour were compared for these clinical and dimensional variables.
Results. – Of the 652 subjects, 42.9% had experienced at least one suicide attempt. Lifetime history of suicidal behaviour was associated with being a woman, a history of head injury, tobacco misuse and indicators of severity of bipolar disorder including early age at onset, high number of depressive episodes, positive history of rapid cycling, alcohol misuse and social phobia. Indirect hostility and irritability were dimensional characteristics associated with suicidal behaviour in bipolar patients, whereas impulsivity and affective lability/intensity were not associated with suicidal behaviour.
Limitations. – This study had a retrospective design with no replication sample.
Conclusions. – Bipolar patients with earlier onset, mood instability (large number of depressive episodes, rapid cycling) and/or particular addictive and anxiety comorbid disorders might be at high risk of suicidal behaviour. In addition, hostility dimensions (indirect hostility and irritability), may be trait components associated with suicidal behaviour in euthymic bipolar patients.

1. Introduction

Bipolar affective disorder (BPAD) is a frequent and chronic psychiatric disorder associated with an increase in all-cause mortality [31,32,40]. In particular, among mental disorders, BPAD is one of the leading causes of suicidal behaviours and this is a major issue in the management of the disease. About 50% of patients with bipolar disorder will experience at least one suicide attempt [24] and 11 to 19% will commit suicide [1,4,16,19].

However, numerous BPAD patients never attempt suicide. Therefore, the identification of warning characteristics associated with suicidal behaviour is a major issue both for clinical practice to develop preventive strategies and for research purposes.

Many studies have investigated clinical characteristics associated with suicidal behaviour. Gender has been associated with suicidal behaviour in BPAD: men have a 4-fold greater risk for suicide than women [50,3,56]. However, reported rates of suicide attempts among women with bipolar disorders are about twice as high as among men with bipolar disorders, suggesting greater lethality of suicide attempts in men [50,53]. Relative to the risk in the general population, BPAD is associated with an increased risk of suicidal behaviour in women and a higher lethality in men.

The following characteristics have also been reported to be associated with suicidal behaviour: (i) more lifetime episodes of major depression [38,48], (ii) depressive episodes or mixed states [38], (iii) early age at onset [48,21], (iv) rapid cycling [21], (v) substance misuse, [46] including alcohol [48,21] or other drugs [21,46], (vi) previous suicide attempts [21], (vii) family history of suicide attempts [48,21] and (viii) comorbid anxiety disorders [21,47], in particular social phobia and generalized anxiety disorder

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[42]. However, the associations between suicidal risk and these various characteristics have not been consistently replicated in the literature. As a consequence, there is still no consensus about which risk factors are genuinely associated with suicidal behaviours in BPAD and further clinical studies are required [42].

The involvement of dimensional characteristics has also been studied: suicidal behaviours in bipolar patients have been associated with several vulnerability dimensions, mainly aggression [38], hostility [1,15,39] and impulsivity [38,39,33,35,51]. Again, however, conflicting results have been obtained. For example, some studies did not find any association between impulsivity and suicidal behaviour in BPAD patients [14,9]. The interpretation of these data remains difficult due to heterogeneity of the instruments, the clinical states at inclusion, the population sampling strategies, and the lack of multivariate analyses taking the associated characteristics into account. Although most studies have focused on impulsivity/hostility, other dimensions such as affective-related dimensions may be relevant. Indeed, affective instability has been suggested to be a predictor of suicidal behaviour in borderline personality disorder but this dimension as a risk factor of suicidal behaviour in BPAD has never been studied [58,28].

We aimed to identify the characteristics of BPAD patients with suicidal behaviour by comparing a large sample of bipolar patients with and without suicidal behaviour; we included their clinical and dimensional characteristics in this comparison.

The aim of this study was to identify both clinical and dimensional dimensions specific to those bipolar patients displaying suicidal behaviour in a large sample of 652 euthymic bipolar patients.

2. Method

2.1. Sampling procedure

Six hundred and fifty two patients with bipolar type I or II were recruited in three university-affiliated psychiatric departments in France (Creteil, Bordeaux, and Nancy). Inclusion criteria were: age over 18 years, caucasian origin and the absence of a current mood episode attested by both a Montgomery-Asberg Depression Rating Scale (MADRS) [34] score below 8 and a Mania Rating Scale (MAS) [7] score below 6, and at least three months elapsed since the last mood episode. Self-report questionnaires were used to assess dimensional features in a subsample of patients using the Affect Intensity Measure [26] ($n = 249$), the Affective Lability Scale [20] ($n = 245$), the Barratt Impulsivity Scale (version 10) [5] ($n = 281$) and the Buss and Durkee Hostility Inventory [11] ($n = 135$). The dimensional study was implemented for the last two years of the recruitment. Thus, a subsample of one hundred and thirty five patients was assessed with the four questionnaires. Institutional review board approval was obtained for this study. Written informed consent was obtained from all participants.

2.2. Measures and procedures

2.2.1. Lifetime axis I diagnosis

The patients were assessed using the Diagnostic Interview for Genetic Studies (DIGS) [37] providing lifetime DSM-IV axis I diagnoses [2]. Information concerning demographic characteristics, history of medical disorders, axis I diagnosis for bipolar disorders, comorbid anxiety and addictive disorders were also collected with the DIGS.

Lifetime history of suicide attempts was defined as self-destructive acts with some degree of intent to end one's life [30] and was assessed using the DIGS.

2.2.2. Dimensions

Dimensions of impulsivity, hostility, affective lability and affect intensity were assessed by using self-report questionnaires.

The Barratt Impulsiveness Scale (BIS-10) is a 34-item self-report questionnaire designed to measure impulsivity [5]. It provides an integrated measure of trait impulsivity and generates scores for attentional/cognitive impulsivity, motor impulsivity and non-planning impulsivity. The version 10 was used in this study; it is the only version that has been validated in the French language [6].

The Buss-Durkee Hostility Inventory (BDHI, 75 items) [11], is designed to measure individual differences in trait hostility (66 items) and guilt (nine items). It generates seven hostility sub scores: assault (physical violence against others), indirect hostility (devious hostility like gossip), irritability (quick temper, ready to explode at slight provocation), negativism (usually oppositional behaviour against authority, refusing to cooperate), resentment (jealousy, anger at the world over mistreatment), suspicion (projection of hostility onto others), verbal hostility (express negative feelings in content and style), and guilt (guilt feeling reported by the subject). There is a substantial body of validation evidence to support the BDHI, a widely used inventory [11,10]. In this study, a total score was derived from the sum of all sub scores.

The Affective Lability Scale (ALS) [20] is a 54-item self-report measure of lifetime lability in affects, i.e. the subject's perception of his/her ability to shift from what they consider to be normal mood (euthymia) to depression, anxiety, anger, and elation (hypomania), as well as shifts between elation and depression, and between anxiety and depression. The total score is defined as the mean of all items. Only the total score was used in this study because the component analysis of the scale has not been validated.

Affect Intensity Measure (AIM) [26] is a 40-item self-report scale that refers to individual differences in the intensity of response to a given level of emotion-provoking stimulation.

Larsen and Diener recommended using the AIM total score defined by the mean of the 40 items of the AIM [26], leading to a unitary view of emotional temperament.

The AIM and the ALS scales have not been validated; they were translated and then back-translated by Prof. Leboyer. Validation studies are underway.

2.3. Statistical methods

Standard statistical tests (Chi^2, Student t-test, Mann and Whitney) were used to compare groups. Gaussian distribution of the quantitative variables was tested using the classical Shapiro-Wilk statistic and QQ plot Graphics. Multivariate analyses were performed using logistic regressions. The association between suicidal behaviour and sub scores was tested only when a difference was observed for the total score of dimensional scales. In our study, BPI and BPII patients were pooled for the following reasons: (i) according to a recent meta-analysis [36], bipolar disorder types I and II do not significantly differ for the rate of suicide, (ii), in our sample, the two types of bipolar disorders did not differ for lifetime presence of suicidal behavior ($P = 0.38$), lifetime presence of violent suicidal behavior ($P = 0.81$) and mean number of suicidal attempts ($P = 0.08$).

All analyses were performed using Statview software. The significance level was fixed at 5%.

3. Results

3.1. Sample characteristics

The sample consisted of 652 bipolar patients (58% women, 42% men): 505 were BPI (77.5%) and 147 BPII (22.5%). The mean (±SD) age at interview was 42.4 ± 13.4 years.