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Brief report

Clinical impact of late diagnose of bipolar disorder

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Abstract

Background: This study assessed the impact of number of years undiagnosed (NYU) on current morbidity in patients with bipolar disorder.
Limitations: The sample size used was rather small, which may make difficult the generalization of our findings to larger datasets. The data about age of onset and age when patients received their diagnosis may present a certain degree of recall error.
Method: Sixty-five bipolar outpatients diagnosed using the Structured Clinical Interview for DSM were included. The main outcome measurements were quality of life (QOL) assessed using the 26-item World Health Organization QOL instrument (WHOQOL-Bref) and depression assessed using the 17-item Hamilton Depression Rating Scale (HDRS).
Results: Age of onset and years of disorder were not correlated with the outcomes assessed. The NYU were associated with higher scores of HDRS ($P<0.01$), lower scores of QOL within the physical ($p<0.01$) and psychological ($p<0.05$) domains of QOL.
Conclusion: Our findings suggest that the NYU may be an important predictor of the current clinical status of bipolar patients.

Keywords: Bipolar disorder; Quality of life; Depression; Diagnosis

1. Introduction

Bipolar disorder (BD) is a chronic and often life-threatening condition with a lifetime prevalence of 1.2% (Weissman et al., 1996). The World Health Organization estimates that bipolar disorder is the fifth leading cause of disability among young adults (Murray and Lopez, 1997). About 15% of patients with BD commit suicide (Goodwin and Jamison, 1990), and mortality in general is increased among bipolar patients (Bauer et al., 2001). There is an emerging body of evidence showing the association of BD with low scores of quality of life (QOL). Quality of life seems to be impaired during mood

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episodes (Namjoshi and Buesching, 2001) but not in euthymic patients (Chand et al., 2004). In patients with bipolar depression, quality of life was reported to be inversely correlated with the level of depression and to be lower in bipolar patients as compared to datasets of unipolar patients (Yatham et al., 2004). A comparison of QOL in bipolar and unipolar depressed patients suggested that the level of depression did not fully explain the lower quality of life within patients with BD (Berlim et al., 2004). The reasons for this differential impact of bipolar depression in QOL may be related to the fact that such patients suffer from mood symptoms for about 10 years before the correct diagnose is made (Lish et al., 2004; Gazalle et al., in press). There is evidence that untreated mood episodes are associated with deleterious changes in the central nervous system (Sheline et al., 2003).

The aim of the study was to assess the impact of the years undiagnosed of bipolar disorder on current morbidity in bipolar patients.

2. Method

This study was a cross-sectional survey of 65 patients with BD, 18 years or older, consecutively assessed from September 2003 to August 2004. All patients were recruited from the Bipolar Disorders Program of the University Hospital at the Federal University, Porto Alegre, Brazil. Patients who met Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria for types I, II and not otherwise specified (NOS) bipolar disorder were included. The assessment was carried out by trained psychiatrists. Patients were interviewed using the Structured Clinical Interview for DSM (SCID). The primary outcome variables were quality of life and level of depression. Quality of life was assessed using the World Heath Organization Quality of Life Brief Scale (WHOQOL-Bref) and depression was assessed using the 17-item Hamilton Depression Rating Scale (HDRS).

Demographic data, age of onset and the age when patients received the diagnosis by a mental health professional were collected using a structured questionnaire. The number of years undiagnosed (NYU) were obtained subtracting the age when patients received the diagnosis of bipolar disorder by a mental health professional from the age of onset. None of the patients were drug-free prior to BD diagnose; most of them were treated for unipolar depression.

Patients were divided according to the number of year undiagnosed into three groups (≤5 years; 6–15 years and ≥16 years). The outcome measures of the three groups were compared using the ANOVA test for heterogeneity and linear trend. In order to adequately adjust for confounders, a linear regression model was used, having each domain of quality of life and HDRS scores as the outcomes. The confounders analyzed were sex, age and family income. Other variables, such as number of suicides attempts, number of hospitalizations and rapid cycling, were not associated with NYU, and therefore, were not included in the regression model.

The Ethics Committee of the HCPA approved the study protocol, and each patient gave written informed consent prior to the interview.

3. Results

Table 1 describes patients in terms of demographic and socioeconomic variables. Patients who remained more than 15 years undiagnosed had a significantly older age. The mean values and standard deviations of the four domains of the WHOQOL for the whole sample were: physical (mean 49.7, S.D. 19.3), psychological (mean 50.0, S.D. 21.3), social (mean 52.5, S.D. 16.9) and environmental (mean 48.7, S.D. 22.4). In terms of the Hamilton Depression Scale (HDRS), the mean value was 10.2 (S.D. 7.1). The outcome variables presented normal distributions, as confirmed graphically, and using the Kolmogorov–Smirnov test.

Table 2 shows the ANOVA and linear trend tests which confirmed a dose–response association between NYU and the physical (p=0.004) and psychological (p=0.01) domains of QOL and for HDRS (p=0.007). No correlation was found between age of onset of the disorder, total number of year of illness and the outcomes assessed. There

Table 1
Description of the sample in terms of demographic and socio-economic variables stratified by number of years undiagnosed (NYU) on current morbidity in patients with bipolar disorder (BD)

Variable	Age of first episode until clinical diagnosis of bipolar disorder			*P* value
	≤5 years (*n*=32)	5–15 years (*n*=16)	≥15 years (*n*=17)	
Sex				0.86*
Men	25.0%	31.3%	23.5%	
Women	75.0%	68.8%	76.5%	
Age (years)				
Mean (S.D.)	38.4 (11.7)	36.4 (11.1)	47.1 (12.1)	0.02**
<40	53.1%	68.8%	29.4%	0.07*
40–59	43.8%	31.3%	52.9%	
≥60	3.1%	0.0%	17.6%	
Family income (US$)				
Median	89.0	94.3	113.0	0.45***
1st tercile	45.2%	31.3%	37.5%	0.72*
2nd tercile	19.4%	37.5%	31.3%	
3rd tercile	35.5%	31.3%	31.3%	

* Chi-square test.
** *T*-test.
*** Kruskal–Wallis test.

was a significant correlation between the NYU and the age patients received their first prescription of mood stabilizers (r=0.47, p<0.01).

After adjusting for confounding, a linear regression showed that HDRS scores, WHOQOL's physical and psychological domains were worse among patients with increased NYU. The regression coefficients for patients with NYU above 15 years were as follows: HDRS: 3.0 (95% CI 0.8; 5.2); WHOQOL's physical: −8.5 (95% CI −14.2; −3.0); WHOQOL psychological: −6.7 (95% CI −12.9; −0.4). The association between NYU and WHOQOL's social domain was of borderline significance.

4. Discussion

As far as we are aware, this is one of the first studies which assessed the impact of the number of years untreated (NYU) on current psychiatric morbidity. One should bear in mind that a sample of 65 patients is rather small to draw any definitive conclusions.

The NYU were correlated to all outcomes assessed. It is unlikely that these results are a by-product of the impact of variables such as age of onset and total number of years of illness, as no correlation was found between these variables and the outcomes assessed. Early age at illness onset is associated with higher odds for rapid cycling and substance abuse/dependence in bipolar patients (Ernst and Goldberg, 2004). However, the present study suggests that lack of treatment may be a better predictor of current quality of life and levels of depression. There is evidence that bipolar patients spend about 50% of their lives symptomatic (Judd et al., 2002) and most of the time these patients are depressed. In unipolar patients, untreated depression is correlated with hippocampal volume loss (Sheline et al., 2003). It is possible that equivalent damages take place in untreated bipolar patients, increasing the odds for poor outcomes.

Our results suggest that the number of years undiagnosed may be an important factor in the determination of current morbidity among bipolar patients.

Table 2
Mean values (SD) of each domain of quality of life (WHOQOL) and Hamilton Depression Rating Scale according to number of years undiagnosed (NYU) on current morbidity in patients with bipolar disorder (BD)

	Age of first episode until clinical diagnosis of bipolar disorder			*P* value
	≤5 years (*n*=32)	5–15 years (*n*=16)	≥15 years (*n*=17)	
WHOQOL domains				
Physical	54.5 (18.8)	53.3 (16.9)	37.2 (17.4)	0.006*
				0.004**
Psychological	54.9 (19.8)	53.1 (21.4)	37.7 (20.0)	0.02*
				0.01**
Social	55.2 (16.2)	55.3 (17.9)	44.8 (15.6)	0.09*
				0.06**
Environmental	51.5 (23.5)	52.5 (23.1)	39.7 (17.5)	0.15*
				0.11**
Hamilton Depression Scale	8.7 (6.0)	8.1 (6.8)	14.7 (7.6)	0.009*
				0.007**

* ANOVA test for heterogeneity.
** ANOVA test for linear tend.

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