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Predominant mania course in Indian patients with bipolar I disorder

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ABSTRACT

Many long-term follow-up studies suggest that bipolar disorder (BD) is highly recurrent and that depressive episodes are commoner than hypomania/manic episodes. However, some studies from tropical countries including India suggest that the patients experience a greater proportion of manic episodes than depressive episodes. The aim of the present study was to examine the course of BD type 1 (BD I) in a sample of hospitalized Indian subjects. We examined the clinical course of 285 BD I subjects with at least 5 years of illness using standard life charting method. These subjects were hospitalized between October 2010 and October 2012. The predominant polarity (having at least two-thirds of their lifetime episodes at one polarity) was mania (79%). Unipolar mania ($\geq$ 3 mania episodes and no episodes of depression) was observed in 48% of the subjects. The frequency of rapid cycling course was noted in 2.5% of the subjects. Predominant manic polarity group had the illness onset mostly with a manic episode (88.9%) and the predominant depressive polarity group with a depressive episode (73.8%). Mania was the predominant polarity with a high rate of unipolar mania and a majority of the subjects had greater number of manic episodes than depressive/mixed episodes. The onset polarity determined the predominant polarity during the course of illness. Predominantly, mania course could have significant implications in the treatment of bipolar disorder.

1. Introduction

Bipolar disorder (BD) is a highly recurring illness (Angst and Sellaro, 2000; Winokur et al., 1994). Recurrent episodes can be both manic and depressive type but the NIMH long-term follow-up studies of BD type I (BD I) have shown the predominance of depressive episodes over manic/hypomanic episodes during the course of the illness (Judd et al., 2002; Post et al., 2003). Studies from other countries, including Spain, Germany, United States have also reported that a majority of the patients with BD I spend a greater proportion of their time in depressive phase than in the manic phase (Baldessarini et al., 2012; Colom et al., 2006; Popovic et al., 2014; Volkert et al., 2014). In the NIMH study, depressive symptoms occupied about 32% of the follow up period, when compared with manic/hypomanic symptoms which occupied less than 10% of the follow up period (Judd et al., 2002). Using weekly mood recordings, Kupka et al. reported that subjects with BD I spent 36% of their time in depressed state, and this was nearly three times more than the time spent in mania/hypomania (Kupka et al., 2007). Similar findings with greater recurrences in the form of depressive episodes have been demonstrated in Systematic Treatment Enhancement Program for Bipolar Disorder cohort (STEP-BD) (Perlis et al., 2006). Overall, depressive episodes are reported to be three times more common than manic episodes in BD 1 (Yatham and Maj, 2010).

Studies from the tropics suggest a significantly higher incidence of mania in the course of BD. These studies from India, Hong Kong, Fiji and Nigeria observe that the course is predominantly occupied by manic episodes and that "unipolar mania" without occurrence of any depressive episodes is not uncommon (Aghanwa, 2001; Chopra et al., 2006; Khanna et al., 1992; Khess et al., 1997; Makanjuola, 1985; Yazici, 2014). Manic episodes accounted for 72% of all the episodes in a study from India (Chopra et al., 2006), and in a study from Nigeria, 55 out of 104 subjects studied had unipolar mania (Makanjuola, 1985). A study from Israel also reported a predominantly manic course of illness (Osher et al., 2000). The predominant polarity in the course of BD has important clinical implications, as treatment of those subjects with predominant manic course could

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differ from treatment of BD with mostly depressive episodes (Popovic et al., 2014; Volkert et al., 2014). We therefore examined the course of BD I in a large consecutive sample of hospitalised Indian subjects by using a standard life charting method.

2. Method

Inclusion criteria for the study included: 1) Consecutive adult patients aged between 17 and 50 years with DSM-IV TR diagnosis of BD type I; 2) illness duration of at least 5 years; and 3) hospitalization for bipolar disorder. Patients with illness duration of at least 5 years were included because many naturalistic follow-up studies have shown that most subjects will have a relapse and often multiple relapses within 4–5 years of index episode (Marneros and Breiger, 2002). Inclusion of patients with at least 5 years illness would help in better characterization of the course, rather than including patients with a shorter illness duration such 1 or 2 years. Subjects admitted over a period of 2 years from October 2010 to October 2012 at the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India were thus recruited for the study. Those with organic mood disorders and clinical evidence of mental retardation and dementia were not included in the study. Subjects who participated in the study gave voluntary written informed consent and the NIMHANS Institute Ethics Committee approved the study.

Four hundred and sixty subjects with a diagnosis of BD I were screened. Out of these, 328 subjects met the study criteria, but 43 subjects refused consent, reducing the study sample to 285 subjects. Subjects were administered the Mini International Neuropsychiatric Interview (MINI) (Sheehan et al., 1998) to confirm the diagnosis of as well as to diagnose comorbid axis 1 psychiatric disorders. Personality disorders were assessed using the Structured Clinical Interview for Axis II Disorders (First et al., 1995). NIMH Life charting method was employed to assess the course of BD (Roy-Byrne et al., 1985). The information for life charting was collated from hospital medical records, clinical notes from previous physicians, and personal interview of patient and his/her immediate family member. The severity of mania and depression were assessed using the Young Mania Rating Scale (Young et al., 1978) and the Hamilton Rating Scale for Depression (Hamilton, 1960) respectively and the global severity was measured by the Clinical Global Impression, Severity scale (CGI-S) (Guy, 1976). Family members were interviewed for the presence of psychiatric disorders in the first degree relatives using the Family Interview for Genetic Studies (FIGS) (Maxwell, 1992). Subjects were classified as predominantly depressed (PD) or predominantly manic (PM) if they had had at least two-thirds of their lifetime episodes at one polarity or the other as per the guidelines of the International Society for Bipolar Disorders (ISBD) (Tohen et al., 2009).

3. Results

Table 1 depicts the socio-demographic and clinical profile of the 285 subjects who formed the sample of this study. It is evident that a majority had predominantly manic course (79%) and unipolar mania was present in less than a half of the sample (48%). Only 82 (29%) of the subjects were on continuous prophylaxis. Among these 82 patients, 61% patients were on lithium carbonate, 17.1% were on sodium valproate, 2.4% were on carbamazepine and 19.5% were on more than one mood stabilisers.

Demographic and clinical characteristics based on predominant polarity are shown in Table 2. Those with predominantly depressed course spent more time in depression, had more depressive episodes, and started the illness with depression. They were somewhat overrepresented by women, had greater family history of major depression and also displayed higher suicidal risk. Those with predominant mania spent more time in mania and, began their illness with mania. As can be seen in Table 3, those with depressed course received more often antidepressants and electro-convulsive therapy (ECT). Overall, percentage of time spent on treatment was low in the sample. A comparison of unipolar mania group ($n = 137$) and the others ($n = 148$) did not reveal any significant differences.

Table 1
Clinical profile and predominant polarity in subjects with bipolar disorder type 1 ($N = 285$).

	N (%)/Mean (Standard Deviation)
Current age (years)	33.6 (11.71)
Age at Onset (years)	22.1 (7.9)
Duration of Illness (years)	11.5 (7.9)
Gender, male	162 (56.8)
Index Episode Polarity	
Mania	238 (83.5)
Depression	40(14)
Mixed	7 (2.5)
HAMD	23.9 (11.8)
YMRS	35.4 (6.04)
Number of hospitalizations	3.3 (2.3)
Comorbid Axis I disorders	
Anxiety disorders	34 (11.9)
Alcohol and substance dependence	103(36.1)
Comorbid Axis II disorders	
Cluster A	8 (2.8)
Cluster B	51 (17.9)
Cluster C	14 (4.9)
Predominant polarity*	
Predominantly mania**	226 (79.3)
Unipolar Mania***	137 (48.1)
Predominantly depression	39 (13.7)
Mixed	3 (1.1)
Unclear	17 (6)
Rapid cycling	7 (2.5)

HAMD-Hamilton Rating Scale for Depression; YMRS-Young Mania Rating Scale; BD-Bipolar Disorder.
* Predominant polarity - Classification of patients with bipolar disorder as either predominantly depressed (PD) or predominantly manic (PM), as defined by having at least two-thirds of their lifetime episodes at one polarity or the other.
** Predominant mania group also includes all the unipolar mania cases.
*** Unipolar mania: ≥ three episodes of mania and no episodes of depression.

4. Discussion

The main finding of this study is the predominance of manic course in a majority of the subjects. Many of the previous studies report that depression is the most common mode of recurrence in BD, thus forming the predominant polarity of BD (Angst, 1978; Judd et al., 2002; Kupka et al., 2007; Perlis et al., 2006; Post et al., 2003; Yatham and Maj, 2010). For instance, in the NIMH Collaborative Depression Study, patients with BD I experienced depression much more frequently than hypomania or mania (Judd et al., 2002). Similarly, 2-year prospective data from the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) cohort, showed that 72% of recurrences were depressive in nature (Perlis et al., 2006). In the 26-year follow up of the Zurich cohort, depressive mood episodes composed 51% of the mood episodes (Angst, 1978). Results from the Stanley Foundation Bipolar Network study revealed a similar finding that depression occupied three times greater proportion of the course compared with mania (Post et al., 2003). In the NIMH Collaborative Depression Study, ratio of depression to mania in BP I was approximately 3:1 (Yatham and Maj, 2010). Some of the other studies from Spain, Germany, Unites States have also reported that a majority of the patients with BD I spend a greater proportion of their time in depressive