Original Article

How Polarity of the First Episode Affects Clinical Characteristics and the Course of Illnesses of Bipolar I Disorder Patients

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Objective: To compare clinical characteristics and courses of illness of bipolar I disorder patients in Siriraj Hospital, who were first presented with either manic or depressive episode.

Materials and Methods: One-hundred and fifty participants with bipolar I disorder who were treated during August 2013 and October 2014. They were divided into two groups by their first mood episode: depressive and manic polarity groups. Data were collected by semi-structured interviews, Diagnostic Interview for Genetic Studies [DIGS] Thai version and chart reviews. Clinical characteristics and courses of illness of both groups were analyzed.

Results: There were 94 and 56 patients in the first episode of depressive polarity group and manic polarity group, respectively. The first episode of depressive polarity group had longer durations of illness and higher numbers of depressive episodes and history of suicide attempts. Odds ratio showed that the first episode of depressive polarity increased risk for lifetime history of suicide and poor concentration than the first episode of manic polarity; odds ratio were 3.04 (95% CI 1.45 to 6.37) and 2.78 (95% CI 1.28 to 6.02), respectively.

Conclusion: The polarity of the first episode impact lifetime clinical presentations and illness severity. Physicians should pay attention on concentration and suicide ideality of bipolar I disorder patients whom first presented with depressive episode.

Keywords: Bipolar I disorder, First episode, Polarity, Course of illnesses, Suicide

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Bipolar I disorder is one of the major psychiatric illnesses, which caused disability, low quality of life, and various difficulties to both patients and the society[1-3]. From Morgan study[4], bipolar I disorder has high relapse rates, and more than three-fourths of the patients experience death wishes and engaged in suicidal attempts. Symptoms and signs may vary depending on the episode polarities and the severity. More importantly, the polarity of first episode is significant in terms of diagnosis and prognosis. Bipolar patients whose the first episode is depression were more likely to be subjected to wrong diagnosis, especially major depressive disorder[5]. Their clinical presentations tended to be more severe than those with the first episode of manic polarity[6,7]. According to the retrospective study[8], the first episode of depressive polarity group had longer illness duration, higher lifetime suicide attempts, and higher prevalence of rapid cycling pattern[8,9]. On the contrary, Rosa et al reported that psychotic features frequently found in the first episode of manic polarity group[10]. The objective of the present study is to compare clinical characteristics and the courses of illnesses of the two groups of bipolar I disorder patients whether manic or depressive.

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Materials and Methods

The research proposal was approved by Siriraj Institutional Review Board (COA 457/2013), then the researchers conducted the cross-sectional study by

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interviewing all participants or their relatives and reviewing medical records retrospectively for recall bias reduction.

Sample

The researchers obtained a representative sample of patients who received service at University Hospital. The sample size must be over 153 for $p<0.05$ and power >80% by using data in the previous study by Perugi et al[8]. The inclusion criteria were 1) Participants were adult bipolar I disorder patients diagnosed by qualified psychiatrists between January 2003 to December 2013, 2) Participants were treated at the outpatient or inpatient psychiatric unit, Siriraj Hospital, and 3) They must experienced more than one mood episodes. The exclusion criteria were 1) Participants with uncertain diagnosis, 2) Participants with communication problems in Thai language, 3) Participants with cognitive impairment especially dementia, 4) Participants who refused to provide their mental illness information, and 5) Participants with severe degree of mood episode, for example, with high risk suicide, or violence. All data were collected during August 2013 and October 2014.

Interview and interviewing tool

The interviewers who were qualified used a semi-structure interview, Diagnostic Interview for Genetic Studies [DIGS] in Thai version[11], which has high validity and inter-rater reliability, specifically part F for major depression and part G for mania/hypomania. During the interview session, the participants were asked about their clinical presentations of both initial and other episodes. Clinical and the course of illnesses included duration of illness, age of the first manic episodes, age of the first depressive episodes, number of episodes, number of hospitalizations, history of suicide attempts, psychotic symptoms history, and symptoms in manic and depressive episodes. Participants were then allocated into two groups according to their first mood episode that initially become evident according to the DSM-IV or DSM-IV-TR criteria[12,13].

Statistical analysis

The comparison of clinical characteristics and the courses of illness of both groups were done by using Chi-square, Fisher exact test, and Mann-Whitney U test. The p-value <0.05 was all considered to be statistically significant. All data were analyzed by SPSS program version 18.

Results

Demographic data and courses of illnesses

One hundred and eighty participants were interviewed. After the interview and chart review process, 15 patients were excluded because of uncertain diagnosis and their initial episode were mixed. Accordingly, 150 participants' data were analyzed. The participants were predominately female. The mean age was 45.4 year-old. There were 94 and 56 participants in the first episode of depressive polarity [F-DP] and manic polarity [F-MP] respectively. Primary outcome is the differentiation of clinical characteristics and course of illnesses between two groups of sample. All demographic data of both groups are shown in Table 1.

By comparison in Table 1, there is no statistically significant difference in the demographic data. First episode of depressive polarity group has longer durations of illness and higher number of depressive episodes. The frequency of history of suicide attempts is significantly higher in the first episode of depressive polarity group than in the manic polarity group (47.9% and 23.2%, p-value = 0.003), as shown in Table 2.

The authors analyzed the clinical presentations[11] in major depressive episode [MDE] and manic episode of both groups. All data showed in Table 3, 4.

The association between the first episode of mood polarity and clinical presentations

The significant associations between the clinical presentations and the variable of the first episodes illustrated in Table 5. The authors analyzed the significant difference between the two groups; lifetime history of suicide attempts, poor concentration, suicide ideality in major depressive episode [MDE], and decreased need of sleep in manic episode.

The first episode of depressive polarity demonstrated greater risk factor for lifetime history of suicide attempts, suicidal ideation, and poor concentration. On the contrary, the first episode of manic polarity demonstrated greater risk factor for decreasing need of sleep (odds ratio = 2.25, 95% CI 1.07 to 4.73).

Discussion

Impact of the first episode on clinical characteristics and the course of illnesses

In this large-scale retrospective study, depressive episode appeared as the most common first episode, approximately three-fifth (59.6%) complied with

previous studies, patients with bipolar I disorder who initially presented with depressive episode ranges from 50 to 66%[3]. This study's results demonstrated the comparison between two groups of Thai bipolar I disorder patients. There was no difference between F-DP and F-MP groups for lifetime rapid cycling which did not conform with previous studies[8-10]. This result could be the impact of much lower rate of total lifetime rapid cycling in this population at 4%. Although several studies[8,10] reported that F-MP experienced higher rates of lifetime history of psychosis, there was also no significant difference between the two groups in the present study.

The first episode of depressive polarity group had longer illness durations, higher number of depressive episodes, higher number of manic episodes, and higher prevalence of suicidal attempts which mirrors the results of previous studies[8-10,14].

Table 1. Demographic data of participants according to the first episode polarity

Clinical characteristics	F-DP (n = 94) n (%)	F-MP (n = 56) n (%)	*p*-value
Age (mean, SD)	45.88 (15.12)	44.59 (16.02)	0.621
Sex			
Male	25 (26.6)	17 (30.4)	
Female	69 (73.4)	39 (69.9)	0.62
Work status			
Employed	45 (47.9)	32 (57.1)	0.272
Marital status			
Single	40 (42.6)	29 (51.8)	
Married	41 (43.6)	21 (37.5)	
Divorced	9 (9.6)	6 (10.7)	
Widow	4 (4.3)	0	0.334
Education			
High school graduate or lower	40 (42.6)	23 (41.1)	
Bachelor degree or higher	54 (57.4)	33 (58.9)	0.859

F-DP = the first episode of depressive polarity; F-MP = the first episode of manic polarity

Table 2. Course of illnesses of participants according to the first episode polarity

Clinical characteristics and course of illnesses	F-DP (n = 94)	F-MP (n = 56)	*p*-value
A duration of illness in year*	15 (2, 48)	9 (1, 50)	0.023[a]
Number of depressive episodes*	2 (1, 72)	1 (0, 8)	0[a]
Number of manic episodes*	2 (1, 70)	2 (1, 8)	0.04[a]
Number of total episodes*	4 (2, 142)	4 (2, 14)	0.023[a]
Age of the first depressive episode*	25.5 (11, 77)	35 (17, 64)	0.003[a]
Age of the first manic episodes*	32.5 (13, 79)	30 (13, 62)	0.102[a]
Number of hospitalization*	1 (0, 7)	1 (0, 8)	0.413[a]
Family history of mood disorder (n, %)	30 (31.9)	16 (28.6)	0.668[b]
Lifetime history of rapid cycling (n, %)	5 (5.3)	1 (1.8)	0.285[c]
Lifetime history of suicide (n, %)	45 (47.9)	13 (23.2)	0.003 [b]
ECT (n, %)	16 (17)	9 (16.1)	0.880 [b]
Substance use (n, %)	31 (33)	14 (25)	0.302 [b]
Lifetime history of psychosis (n, %)	50 (53.2)	35 (62.5)	0.266[b]

[a] Mann-Whitney U test, [b] Chi-square, [c] Fisher exact test
F-DP = the first episode of depressive polarity; F-MP = the first episode of manic polarity
* Data expressed as median (minimum, maximum)

Table 3. Clinical presentations in major depressive episode of both groups

Clinical presentations inmajor depressive episode	F-DP (n = 94) n (%)	F-MP (n = 46)* n (%)	*p*-value
Depressed mood	93 (98.9)	44 (95.7)	0.208
Anhedonia	76 (80.9)	41 (89.1)	0.214
Significant weight change or change in appetite	54 (57.4)	22 (47.8)	0.283
Insomnia or hypersomnia	82 (87.2)	36 (78.3)	0.171
Psychomotor retardation or agitation	37 (39.4)	18 (39.1)	0.979
Fatigue	70 (74.5)	40 (87.0)	0.091
Inappropriate guilt or worthlessness	53 (56.4)	25 (54.3)	0.820
Poor concentration	75 (79.8)	27 (58.7)	0.008
Suicidal ideations or attempts	61 (64.9)	20 (43.5)	0.016

F-DP = the first episode of depressive polarity; F-MP = the first episode of manic polarity
* Ten participants in F-MP have only manic episodes

Table 4. Clinical presentations in manic episode of both groups

Clinical presentations ofmanic episode	F-DP (n = 94) n (%)	F-MP (n = 56) n (%)	*p*-value
Grandiosity	80 (85.1)	51 (91.1)	0.288
Decreased need of sleep	56 (59.6)	43 (76.8)	0.031
Intensified speech	69 (73.4)	42 (75)	0.829
Racing thought	67 (71.3)	40 (71.4)	0.984
Distractibility	47 (50)	34 (60.7)	0.203
Increase in goal-directed activity	65 (69.1)	42 (75)	0.443
Excessive involvement in pleasurable activities	54 (57.4)	32 (57.1)	0.971

F-DP = the first episode of depressive polarity; F-MP = the first episode of manic polarity

Table 5. Association between the first episode of mood polarity and clinical presentations

Clinical presentations	F-MP (n = 94) n (%)	F-DP (n = 56) n (%)	Odds ratio	95% CI
Lifetime history of suicide	13 (23.2)	45 (47.9)	3.04	1.45 to 6.37
Clinical presentations in MDE				
Poor concentration	27 (58.7)	75 (79.8)	2.78	1.28 to 6.02
Suicidal ideations or attempts	20 (43.5)	61 (64.9)	2.40	1.17 to 4.95

F-DP = the first episode of depressive polarity; F-MP = the first episode of manic polarity

The first episode of depressive polarity was also significantly associated with lifetime history of suicidal attempts; odds ratio was 3.04 (95% CI 1.45 to 6.37). This result supported the previous study[8]. The F-DP group tended to have more severe clinical presentations than F-MP group, indeed, this result related to several studies[15-17]. The present study demonstrated all clinical presentations of major depressive and manic episode in both groups of participants. The first episode of depressive polarity appeared to have higher risk for suicidal ideation and poor concentration while participants were in major depressive episode (odds ratio are 2.40 and 2.78, respectively). On the contrary, F-MP appeared to be a risk factor for decreasing need of sleep (odds ratio = 2.25). This result may affected the clinicians' preference

of mood stabilizer, for example, lithium for patients with F-DP, and quetiapine (or sedative mood stabilizer) for patient with F-MP.

Age of the first depressive episode in bipolar and major depressive patients

The age difference of the occurrence of the first depressive episode between patients with major depressive disorder and bipolar depression was analyzed by the non-parametric test. The average age (median) of the first onset of 94 F-DP participants was 25.5 year-old. Sadock[18] stated that the mean age of onset of MDD patients was 40 year olds. This result implied that bipolar depression patients had younger age of onset than MDD group.

The present study is the first report of clinical characteristics and the course of illnesses of bipolar patients in Thailand. The researchers evaluated the importance of the first episode and analyzed the risk factors for some significant clinical presentations such as suicidal ideation and poor concentration. The result suggested the differences in age of the first depression between MDD and bipolar patients which embolden further studies.

The study had limitations as followed: First, the authors did not include a group of patients with the first episode as mixed episode. Second, the role of psychiatric co-morbidities, which may play a role in clinical significance such as personality disorder, medical conditions, or anxiety disorder was not included. Third, the number of participants was lower than the calculated sample size because of time restrictions and unexpected non-eligible participants who revealed to have uncertain psychiatric diagnosis.

Conclusion

The polarity of the first episode may be an important contributor to the severity of illnesses for each bipolar I patients. The first episode of depressive polarity appeared to be a risk factor for cognitive symptoms such as suicidal ideation and poor concentration. These results can be applied for clinicians to pay special attention on cognitive symptoms in bipolar I disorder patients with the first episode of depressive polarity.

What is already known on this topic?

Many recent studies agreed that the polarity of first episode is remarkable in terms of course of illness and prognosis in bipolar I disorder. Clinical presentations and course of illness were compared between two groups of bipolar I patients. Result showed that clinical presentations of the first episode of depressive polarity tended to be more severe than those with the first episode of manic polarity. On the other hand, comparing some symptoms; psychotic symptoms, rapid cycling, and suicidal behavior, is still in conclusive.

What this study adds?

The present study collected data from both interviewing and retrospective chart review for recall bias reduction. The present study demonstrated new topics by comparing symptoms of major depressive and manic episode between two groups. The result showed significant difference; higher rate of suicidal ideation, poor concentration in F-DP, and higher rate of decreasing need of sleep in F-MP.

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Potential conflicts of interest

None.

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