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Identifying Recent Manic Symptoms by Newly Discharged Patients with Bipolar Disorder

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Abstract

Background: Bipolar disorder type I is a chronic and recurrent disease and is considered as the ninth nonfatal disease. Identifying the symptoms of the manic episode, which are more likely detected by patients, increases the ability of psychiatrists in diagnosing this disorder.

Methods: In this cross-sectional study, a total of 96 patients with bipolar disorder were enrolled from 2 academic psychiatric centers. Then, using the patients' medical records, demographic data were collected. Further, both the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) interview and the Young mania rating scale (Y-MRS) scale were also performed. Then, about 27 to 33 days after discharge, the patients were contacted by phone and the SCID-I interview was conducted again. Meanwhile, to make the patients focus on the period from which they have recently improved, the phrase "the recent period of hospitalization" was added to the interview questions and the symptoms were checked.

Results: At the beginning of the hospitalization, the most common symptom in the total population was irritable mood (89.5%): in the male population decreased need for sleep (98.2%), and in the female population irritable mood (97.5%). In addition, in the evaluation, about 1 month later, irritable mood (69.7%) and decreased need for sleep (67.7%) were the most common symptoms detected by the patients. In terms of the predictive value of each symptom to the diagnosis of that symptom by the psychiatrist, the highest positive predictive value was related to the symptoms of irritable mood (95.5%), decreased need for sleep (95.4%), and talkativeness (95.2%). However, the highest negative predictive value was related to the symptom of elevated mood (87.5%).

Conclusion: The patients who have passed manic episodes are more able to detect some symptoms of this episode. Despite some limitations, it seems that using these statistical findings in practice may promote clinical assessment and diagnosis of bipolar disorder type I by psychiatrists.

Keywords: Bipolar Disorder, Symptom, Mania, Manic Episode, Phenomenology

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Introduction

Bipolar disorder type I is a chronic and recurrent disease and is considered as the ninth nonfatal disease, with a high prevalence among all ages, and it is the fifth among those in the 15-44 years age group (1). This debilitating disease often starts before the end of adolescence (2). Bipolar disorder is characterized by the recurring symptom s of de-

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↑What is "already known" in this topic:
The symptoms that have been mentioned in different studies as prodromal symptoms in the manic phase of bipolar disorder include irritability, sleep disturbance, increased activity, and anxiety symptoms.

→What this article adds:
The patients who have left the manic episode are more able to detect some symptoms of this episode. These symptoms can further be used to increase the psychiatrists' ability in diagnosing the disorder.

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pression and mania that recur according to an imaginable pattern (3).

In bipolar disorder, the prodromal symptom is defined as any kind of emotional, behavioral, and cognitive sign or symptom that can be seen in the early stage of any episode (4). The symptoms mentioned in different studies as prodromal symptoms in the manic phase of bipolar disorder include irritability, sleep disturbance, increased activity, and anxiety symptoms (5). In some studies, changes in energy and decreased need for sleep are mentioned as the most common prodromal symptoms (6).

An untreated disorder may lead to more severe and rapid cycling episodes, which in turn can make treatment more difficult, worsen prognosis, and lead to further complications (7). Therefore, the diagnosis of bipolar disorder before starting its full episode seems useful and early intervention can prevent the development of the full episode of the disorder and reduce the consequences (5). In a cohort study, it was observed that in addition to medical treatments and regular visits to psychiatric services, intervention in the warning symptoms for enhancing the patient's ability to recognize and manage the prodromal symptoms of depression and mania will prolong the intervals between the relapses and reduce the risk of hospitalization (6). Psychosocial treatments may bring about better outcomes for some patients (8). In this kind of treatment, the patients will be taught about the early symptoms of exacerbation (9).

For many reasons, diagnosis of bipolar disorder outside the manic acute episodes is either difficult or not done accurately: (1) many patients are not adequately insightful to their disease; (2) some patients are psychotic; (3) hypomania episode is considered by many patients as a period of high performance and not a sickness and, therefore, in expressing the risk of their disease to the doctor, patients rely only on the periods of depression; (4) in the course of their disease, the patients are more in the depressive episode and not in mania or hypomania episodes; (5) bipolar disorder stigma may prevent the patients to express its symptoms; (6) Most of the time physicians emphasize on asking about the periods of elevated mood and they ignore asking about periods of irritability, especially in outpatients.

It showed that about 22% of patients with bipolar disorder and around 47% of their families report the history of this disorder's symptoms only when they are asked about it (10).

Encountering some patients, clinical therapists may suspect that they have bipolar disorder and the only available tool for therapeutic decision-making is to trust the patient's answers to the questions asked about their previous mania or hypomania symptoms. As such, validating and trusting these answers is sometimes difficult even for experienced therapists. Hence, although the most common symptoms can be detected by the patients after the mania phase, this study tried to detect more functional symptoms. Specifically, by increasing information about the ability of patients with bipolar disorder in identifying their symptoms in the previous episode of mania, psychiatrists can enhance their ability to diagnose this disorder.

In line with this goal, through evaluating the symptoms of the disorder during the hospitalization process and rechecking the symptoms that have remained with patients after being discharged from the hospital and in the euthymic phase, the present study aims to get the most common symptoms that the native patients are able to detect. These symptoms can further be used to increase the psychiatrists' ability in diagnosing the disorder, thereby helping the patients more effectively According to the importance of early intervention to prevent a complete episode of mania and its consequences, as well as the difficulty of diagnosing bipolar disorder out of an acute manic episode, we have attempted to recognize functional symptoms by the most prevalent diagnosis that is recognizable by patients after the manic phase.

Methods

Study Population

In this cross-sectional study, Patients with bipolar disorder type I who were hospitalized in the 2 academic centers of Iran Psychiatric Hospital and the psychiatric ward of the Prophet Mohammad (PBUH) hospital, were selected. Since the beginning of the summer of 2012, all the patients who were diagnosed with bipolar disorder (manic episode) by the psychiatric attendant and hospitalized in these 2 centers and met the entry criteria were included in the study. Inclusion criteria were as follows: (1) diagnosis of bipolar disorder type I (manic episode) by the professor and based on the DSM-IV-TR diagnostic criteria; (2) diagnosis of bipolar disorder using a structured clinical interview (SCID-I) by a trained psychiatric resident; (3) age of 18 to 65 years; (4) Persian language; (5) no history of mental retardation based on the clinical interview; (6) signing the informed consent form; and (7) having a fixed telephone line; (8) no history of substance use; (9) no history of electroconvulsive therapy during hospitalization; and (10) no history of cognitive disorder. At the beginning of each month, a number of patients who met the inclusion criteria were selected (based on the calculated sample size).

Over 12 months, based on the calculated sample size, 96 patients were selected. These patients were hospitalized in 2 academic centers of Iran Psychiatric Hospital and the psychiatric ward of the Prophet Mohammad (PBUH) hospital in Tehran. Thus, each month hospitalized patients with bipolar disorder in the manic phase whose disorder was diagnosed and confirmed by the psychiatric attendant were selected. The patients' demographic information was extracted from their medical records. Then, a SCID-I interview was conducted for them by a senior psychiatric trainee and the Y-MRS form was filled. However, Patients who were unable to be interviewed due to the severity of their symptoms were interviewed a week later. The interviewer in all interviews was the same person (the first author of the article).

The SCID-I is a semi-structured interview to detect axis I disorders based on the DSM-IV. Its semi-structured nature means that its implementation requires the clinical judgment of the interviewer about the interviewee's responses. In this regard, the interviewer should have clini-

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cal knowledge and experience about psychiatric disorders. Given this issue, the SCID-I was conducted in this study by a senior psychiatric trainee. This tool is used in the field of psychiatry more than any other instrument. Accordingly, it was also used in this study to assess and diagnose the symptoms of mania. The reliability and the validity of its Persian version were confirmed by Sharifi et al (11).

The Y-MRS checklist is a tool for determining the severity of manic episode symptoms through assessing the patient's symptoms and quantitative scoring of each symptom scored by the clinical judgment of the clinician and it has 11 paragraphs. It is scored from 0 to 60, where a score below 12 means remission of the symptoms (12). The reliability and the validity of the Persian version was confirmed by Barekatein et al (13). This tool used in this study to find the severity of the mania in patients included in the study.

After completing the above steps, in a time period from 27 to 33 days after the discharge of the patients, they received a phone call to check their recent hospitalization symptoms. However, in 3 cases, despite prior consent, the patients were not willing to be reinterviewed and thus excluded from the study. Nevertheless, as the follow-up and the sampling progressed simultaneously, new patients were replaced. Through a telephone conversation with the patients, the SCID-I interview was conducted for them again. However. As in the SCID-I interview the symptoms are questioned both in the recent episode and throughout the life, and the purpose of our study was only to assess the symptoms in the recent episode, the phrase "recent period of hospitalization" was added to the questions to help patients focus on their recent period and then the symptoms were checked with them.

Data Analysis

The symptoms were derived from the records of the patients and an interview at admission time; the symptoms were also checked again 1 month later, according to sex and education level. Using SPSS 20 (SPSS Inc) software, the data were analyzed. The significance level of the tests was set at .05 and all tests were bilateral. For the descriptive analysis, quantitative variables (minimum, maximum, mean, and standard deviation) and for qualitative variables, numbers (percentage) were reported. The Fisher exact test was employed to assess the relationship between the 2 qualitative variables.

Results

The age of the 96 patients of the study was between 18 and 65, with the mean age of 36.73 ± 12.34 years. Out of them, 56 patients (58.3%) were male and 40 patients (41.7%) were female. Further, 46 patients had high school diploma and higher degrees, while the educational level of 50 patients was less than a high school diploma. Meanwhile, 25 patients (26%) had been hospitalized for the first time and 71 (74%) more than once. The scores of the Y-MRS scale for the study participants were between 18 and 45, with a mean of 32.20 ± 6.31.

In the first assessment and according to the contents of the hospitalization records, along with the SCID-I interview, the most common symptom was decreased need for sleep 92 (95.8%). The frequency percentage of other symptoms at the time of admission is presented in Table 1. The symptoms of admission time were also evaluated in the sex subgroups, where only elevated mood and irritable mood were significantly different between male and female patients (Table 1).

In the evaluation performed 1 month later, based on the SCID-I renewed interview, the symptoms that were most

Table 1. Frequency distribution of the symptoms based on hospitalization records and patients' remembering one month later

Symptom	Male (n = 56)				Female (n = 40)				Total (n = 96)				Fisher Test	
	Hospitalization		Remembering		Hospitalization		Remembering		Hospitalization		Remembering		Hospitalization	Remembering
	N	%	N	%	N	%	N	%	N	%	N	%	P-Value*	P-Value*
Elevated mood	17	30.4	12	29.4	2	5	4	10	19	19.7	16	16.6	0.002*	0.172
Irritable mood	47	83.9	39	69.6	39	97.5	28	70	86	89.5	67	69.7	0.042*	1.000
Inflated self-esteem	39	69.6	23	41.1	28	70	19	47.5	67	69.7	42	43.7	1.000	0.540
Decreased need for sleep	55	98.2	42	75	37	92.5	23	57.5	92	95.8	65	67.7	0.305	0.081
Talkativeness	52	92.9	25	44.6	33	82.5	17	42.5	85	88.5	42	43.7	0.192	1.000
Distractibility	15	26.8	11	19.6	16	40	13	32.5	31	32.2	24	25	0.191	0.162
Psychomotor agitation	43	76.8	31	55.4	33	82.5	23	57.5	76	79.1	54	56.2	0.613	1.000
pleasurable activities **	32	57.1	22	39.3	25	62.5	16	40	57	59.3	38	39.5	0.676	1.000
Psychotic symptoms	29	51.8	7	12.5	18	45	7	17.5	47	48.9	14	14.5	0.541	0.564

*: Significant at the level of 0.05 ** Pleasurable activities with a high potential for painful consequences

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Table 2. Frequency Distribution of Recognizing Symptoms in Patients who Have Been Hospitalized With the Same Symptoms

Symptom	Male	Female	Total
Elevated mood	47	50	47.3
Irritable mood	76.5	71.7	74.4
Inflated self-esteem	53.8	53.5	53.7
Decreased need for sleep	74.5	56.7	67.3
Talkativeness	48	45.4	47
Distractibility	40	43.7	41.9
Psychomotor agitation	60.4	63.6	61.8
pleasurable activities*	53.1	40	47.3
Psychotic symptoms	20.6	33.3	25.5

* Pleasurable activities with a high potential for painful consequences.

Table 3. Recognizing Positive and Negative Predictive Values for Eeach Symptom in the Study Population

Symptom	PPV	NPV	Sensitivity	Specificity
Elevated mood	56.2	87.5	74.4	90.9
Irritable mood	95.5	24.1	74.4	70
Inflated self-esteem	85.7	42.6	53.7	79.3
Decreased need for sleep	95.4	3.2	67.4	25
Talkativeness	95.2	16.7	47.1	81.8
Distractibility	54.2	75	41.9	83.1
Psychomotor agitation	87	31	61.8	65
pleasurable activities*	71.1	48.3	47.4	71.8
Psychotic symptoms	85.7	57.3	25.5	95.9

* Pleasurable activities with a high potential for painful consequence

likely identified by the patients were extracted. In general, the symptom that was more likely identified was irritable mood (67; 69.7%), followed by decreased need for sleep (65; 67.7%), which was not statistically significant for the sex subgroups (Table 1).

Then, this question arose that what percentage of patients who had a symptom at the time of admission could detect that symptom after a month. To this end, using adaptive tables and statistical calculations, the highest probability of detection (74.4%) was observed in those who had experienced a symptom of irritable mood in their manic episode. However, the lowest probability belonged to detecting psychotic symptoms (29.5%) and distractibility (41.9%) (Table 2).

Then, to find the value of any sign in clinical practice, positive and negative predictive values were calculated by the psychiatrist at the admission time for each symptom and its association with that symptom's diagnosis. In general, the highest positive predictive value belonged to the symptoms of irritable mood (95.5%), followed by decreased need for sleep (95.4%) and talkativeness (95.2%), while the highest negative predictive value was related to the elevated mood (87.5%) (Table 3).

Discussion

The results suggested that in the first assessment, according to the contents of hospitalization records and the SCID-I clinical interview, decreased need for sleep (92%) was the most common symptom in the patients. However, in this study, the frequency of elevated mood, which according to the DSM-IV is 1 of the 2 key symptoms of mania, has been low in the hospitalized patients, particularly in women (19%). On the other hand, bias in recalling mood changes and its evaluation was mentioned in other studies as a normal mood change (14). In the evaluation performed about 1 month later, based on the SCID-I renewed interview, irritable mood (69.7%) and decreased need for sleep (67.7%) were the most common symptoms detected by the patients. In assessing the patients who had a symptom at the beginning of hospitalization and detected it after 1 month, the highest probability of detection (74.4%) was observed in those who had experienced a symptom of irritable mood in their manic episode, while the lowest probability belonged to detecting psychotic symptoms (29.5%) and distractibility (41.9%). Forgetting the symptoms is not uncommon in psychotic symptoms, and the reason for forgetting distractibility can be found in the nature of the symptom.

In Sethi study (1993), conducted based on the DSM-III-R in the East of India on 100 patients with bipolar disorder who were in the manic phase and all of them were male, using the Present State Examination, the symptoms of elevated mood, increased ideomotor energy, and grandiosity delusion were observed in almost all patients (15). In contrast, in the present study, elevated mood had the lowest frequency. This difference between the present study and that of Sethi study may be attributed to the fact that the latter has used only male patients and a different tool. In a systematic review, it was found that the first symptom of the manic phase has been sleep disorder with a mean prevalence of 70% (16). In a similar way, in the present study, the most common symptom at the time of admission was decreased need for sleep, but its prevalence was higher (92%).

However, some questions may arise: why were these two 2 symptoms (irritability and decreased need for sleep) were detected more than the other symptoms? Are these symptoms more observable by relatives and family members followed by the attitudes and reactions that lead to the formation of some memories in the patients' mind? To answer these questions, further studies and assessment of indicators such as the patients' insight are required. In a study conducted on 111 outpatients, using interviews and open-ended questions, prodromal symptoms of the manic

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episode were evaluated in patients with and the following results were obtained: changes in energy levels (21%), sleep (17%), and social performance (16%) (6). In this study, in contrast to our study—in which interviews were performed by phone and filling SCID-I forms— face-to-face interviews were conducted using open-ended questions (6). Hence, perhaps one reason that the percentage of detecting obtained symptoms has been higher in the present study is rereading of the SCID-I interview questions for the patients, which has been effective in remembering and detecting the symptoms. On the other hand, short timeframe of the present study (about one month) may have contributed to the improvement of this detection. In another study conducted on 42 bipolar outpatients in which the patients' information was collected retrospectively, symptoms before the first episode were as follows: increased energy (85.7%), racing thoughts (78.6%), physical restlessness (76.2%), talkativeness (71.4%), and decreased need for sleep (71.4%). However, identifying all symptoms had a higher frequency in the present study. Meanwhile, in both of the above studies, which were selected to be compared with the present study, the symptoms of the manic acute phase were directly addressed and questioned as prodromal symptoms. This has been the main difference between these studies and the present study. In order to find the value of each symptom in clinical practice, in the present study, positive and negative predictive values were calculated by the psychiatrist at the admission time for each symptom: the highest positive predictive value belonged to the symptoms of irritable mood (95.5%), followed by decreased need for sleep (95.4%) and talkativeness (95.2%), while the highest negative predictive value related to the elevated mood (87.5%). In other words, confirming the presence of these three symptoms—irritable mood these 3 symptoms—irritable moods, decreased need for sleep, and talkativeness—by the patients, can ensure the therapist that these symptoms have existed in the patient's history. A more interesting point has been the rejection of elevated mood by the patients, which showed almost an equal negative predictive value. Many times, it has been observed that clinicians insist on evaluating elevated mood in the patients suspected to have bipolar disorder and the negative answers of the patients is not acceptable for them. However, our study showed that this symptom has a high negative predictive value and the negative answer of the patients can be trusted.

we think that during the clinical interview, the only available tool for the clinician to diagnose a symptom correctly is to trust the patients' ability in detecting and remembering the symptoms of previous periods of mania or hypomania. However, doing this is sometimes difficult during the time-constrained interviews. The patients who have left the manic episode are more able to detect some symptoms of this episode. This study aimed to identify these symptoms. It is recommended that psychiatrists be aware of these symptoms and evaluate them in their interviews to improve their ability to identify manic episodes.

There were some limitations in this study, such as sample size, insufficient study time (3 to 6 months after releasing), examining only patients with bipolar disorder, and being convinced with only the patients' report. Therefore, we suggest that future studies be a larger sample size, with longer time between discharge and evaluation of the diagnosis.

Conclusion

As all present samples had experience manic episodes that lead to hospitalization, we suggest that future studies include all patients who suffer from mood disorders. such as those with no obvious history of mania and hospitalization and suffer from depressive episodes, especially in outpatients. Because as we know it is important to diagnose possible mania and bipolar disorder in some patients who suffer from depressive episode.

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Conflict of Interests

The authors declare that they have no competing interests.

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