Research Report

COMPARISON OF SOCIO-DEMOGRAPHIC AND CLINICAL FACTORS BETWEEN "UNIPOLAR MANIA" AND BIPOLAR AFFECTIVE DISORDER

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ABSTRACT

Background: Bipolar Affective Disorder is defined as an affective or mood illness characterised by distinct episodes of elevated mood and sad mood. However, many patients report recurrent episodes of mania but no depressive episodes usually termed as Unipolar Mania. Our study aimed to identify Unipolar Mania among patients diagnosed with Bipolar Affective Disorder and assess any difference in the clinical and socio-demographic profile between the two groups. **Material and methods**: This cross-sectional observational study was conducted between April 2020 and March 2021 at the outpatient clinic of a tertiary care medical college hospital. Patients aged >18 years and diagnosed with Bipolar Affective Disorder as per ICD-10 criteria constituted the study population. Patients with a history of any medical illness that may significantly influence CNS function or structure as judged by clinical evidence were excluded. **Results:** A total of 52 patients were included in the present study after obtaining informed consent, 26 patients each in both groups. The mean age of patients in the Unipolar Mania (UM) group was 38.77±12.42 yrs, and Bipolar Affective Disorder (BPAD) group was 41.15±12.47yrs. The younger age of onset was noted among UM group (25.62±5.31) compared to the BPAD group (28.69±6.29). Psychotic symptoms in the first episode, suicidal attempts, comorbid anxiety disorder, substance use disorder and medical illness were more common among the BPAD group. In contrast, the seasonality was more common among UM group. There was no significant difference between the two groups regarding the number of episodes, the number of psychotic episodes, and mood-congruent psychotic episodes. The Childhood Trauma Questionnaire score was almost similar in both groups. **Conclusion:** There were no significant differences between the Unipolar Mania (UM) group and Bipolar Affective Disorder (BPAD) group regarding clinical and socio-demographic variables. Unipolar mania, perhaps, is not a distinct nosological disorder. Unipolar mania could be considered a course specifier similar to how rapid cycling, seasonality, and peripartum onset mood disorders are considered rather than a separate nosological entity.

Keywords: Unipolar Mania, Bipolar Affective Disorder, Childhood trauma, clinical features

INTRODUCTION

Bipolar Affective Disorder is defined as an affective or mood illness characterised by distinct episodes of elevated mood (mania) and sad mood (depression).[1] However, many patients report recurrent episodes of mania but no depressive episodes usually termed as Unipolar Mania.[2] The concept of Unipolar Mania (UM) has been described for more than a century. This entity has received various names at various points in the

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history. Kraepelin referred to it as "Periodic Mania", [3] whereas Karl Leonhard gave the name 'Pure Phasic Psychoses', which he differentiated from 'Polymorphous Phasic Psychoses'.[4] He suspected a different aetiology based on his observation that there was lesser genetic loading and more number of older siblings in such patients. In a 20 year follow up study of 27 patients, Solomon et al. noted that seven did not develop a depressive episode. They suggested that it is perhaps a diagnostically stable entity.[5] The prevalence of Unipolar mania vary widely across different populations. It is as low as 2.7% in Lithium clinic patients from India[6] to 47.2 % of all Bipolar patients in Fiji[7] to 65.3% of all Bipolar I patients in a study from Tunesia.[8] In a recent study by Grover et al., they found the prevalence to be 5.4 % when they used a stringent definition of Unipolar Mania.[9] The wide variation in prevalence rates is due to variations in the clinical criteria used to define Unipolar Mania.

Unipolar mania has received very little attention, and there is poor consensus between researchers. One of the major limitations to research in the area of Unipolar Mania is the lack of consensus on the clinical criteria. Some researchers have suggested that patients with one or more manic episodes may be considered as having Unipolar Mania.[10] Others have suggested three[11,] whereas some others have suggested four or more episodes.[12] The American Psychiatric Association's Diagnostic and Statistical Manual-5 (DSM-5) doesn't recognise patients with recurrent manic episodes alone as a separate nosological entity, and such patients receive a diagnosis of Bipolar I disorder.[13] However World Health Organization's International Classification of Diseases-10 (ICD-10) has included it under F31.8, i.e. "Other Bipolar Affective Disorders".[1] Neither have they given a clinical description nor have they spelt out the defining criteria and clubbed it along with Bipolar-II disorder under a residual category.

Recent literature from India suggests that patients with Unipolar Mania had a lower proportion of suicide attempts, a higher number of manic episodes per year of illness and a higher proportion of psychotic symptoms in their lifetime.[9] Neuro-radiological studies conducted using CT scan report that the third ventricular width is significantly different between Bipolar and Unipolar Mania patients.[14] Yazici et al. reported that patients with Unipolar Mania have more psychotic features than Bipolar-I patients and tended to be less responsive to Lithium prophylaxis which suggests that patients with Unipolar Mania need a distinct approach for successful management.[12] Hence it is imperative to study the characteristics of Unipolar Mania.

Our study aimed to identify Unipolar Mania among patients diagnosed with Bipolar Affective Disorder and assess any difference in the clinical and socio-demographic profile between the two groups.

MATERIALS AND METHODS

This cross-sectional observational study was conducted over a period of one year, i.e. between April 2020 and March 2021, at the outpatient clinic of a tertiary care medical college hospital after obtaining ethical approval from the Institutional Ethics Committee (Protocol No: YEC2/447). Patients aged >18 years and diagnosed with Bipolar affective disorder as per ICD-10 criteria constituted the study population.[1] Patient with a history of any medical illness that may significantly influence CNS function or structure (like mental retardation, significant head injury, seizure disorder, etc.) were excluded as judged by clinical evidence.

Definitions

Manic episode: According to ICD-10 F.30.1, Manic episode is characterised by symptoms like elevated/irritable mood, increased energy, the pressure of speech, overactivity, decreased need for sleep, distractibility, inflated self-esteem, grandiosity and excessive optimism for a duration of at least one week.[1]

Unipolar Mania: As per the definition proposed by Aghanwa, in our study, we defined Unipolar Mania (UM) as patients who had three previous episodes of mania or hypomania without any history of depressive episodes according to ICD-10 criteria and the presence of affective illness for at least four years.[7]

Bipolar Affective Disorder: In our study, any patient who had episodes of mania and depression in their lifetime were included in Bipolar Affective Disorder (BPAD) group.

Procedure

Written informed consent was obtained from the patient if the patient had good insight during the inter-episodic period of illness. Informed consent was taken from a close relative if the patient had an active manic episode or lacked insight.

Table 1 Comparison of mean age of inipolar mania and bipolar disorder

	Unipolar Mania Mean±SD	Bipolar Disorder Mean±SD	t-value	p-value
Age in years	38.77±12.42	41.15±12.47	-0.691	0.493
Age of onset	25.62±5.31	28.69±6.29	-1.905	0.063

Table 2. Comparison of demographic details of unipolar mania and bipolar disorder

Variable	Categories	Unipolar Count(%)	Bipolar Count(%)	Chisquare (p-value)
Gender	Male	17(65.4)	16(61.5)	0.083 (0.773)
	Female	9(34.6)	10(38.5)	
Residence	Urban	3(11.5)	1(3.8)	1.083 (0.298)
	Rural	23(88.5)	25(96.2)	
Education	Illiterate	0(0.0)	0(0.0)	0.974 (0.808)
	Primary	11(42.3)	8(30.8)	
	High school	11(42.3)	13(50.0)	
	Higher secondary	3(11.5)	3(11.5)	
	Graduate	1(3.8)	2(7.7)	
	Postgraduate	0(0.0)	0(0.0)	
Occupation	Unemployed	21(80.8)	21(80.8)	2.853 (0.240)
	Unskilled	0(0.0)	0(0.0)	
	Semiskilled	5(19.2)	3(11.5)	
	Skilled	0(0.0)	2(7.7)	
Marital status	Unmarried	10(38.5)	5(19.2)	2.853 (0.240)
	Married	11(42.3)	12(46.2)	
	Separated/Divorced	5(19.2)	9(34.6)	
	Widow	0(0.0	0(0.00	
Socioeconomic status	BPL	23(88.5)	25(96.2)	1.083 (0.298)
	APL	3(11.5)	1(3.8)	
Family history of bipolar affective disorder	Yes	20(76.9)	16(61.5)	1.444 (0.229)
Family history of other psychiatric illness	Yes	0(0.0)	1(3.8)	1.020 (0.313)
Premorbid hyperthymic temperament	Yes	17(65.4)	15(57.7)	0.325 (0.569)

Diagnosis of Bipolar Affective Disorder was confirmed using MINI (The Mini-International Neuropsychiatric Interview English Version 5.0.0)[15,] and inclusion and exclusion criteria were applied. If inclusion criteria and definition for Unipolar Mania were met, they were included in UM group. In contrast, patients who had manic and depressive episodes in their lifetime were put in the BPAD group.

Details of socio-demographic and clinical data were obtained by direct interview with patients and their caregivers and supplemented by the patient's old medical record if available. Comorbid anxiety disorders and substance use disorders were identified using MINI. Childhood trauma was assessed using the Childhood Trauma Questionnaire (CTQ).[16]

Sample size: Sample size was calculated based on a study in the Indian population by Ravi Philip Rajkumar[17] and using G* power software at 5 % level of significance, and 80 % power with effect size 0.8, the sample in each group was 26.

Statistical analysis: Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS for Windows, Version 21.0.Chicago, SPSS Inc.). Results on continuous measurements are presented as mean ± standard deviation and are compared using independent t-test. Discrete data are expressed as numbers (%) and are analysed using the Chi-square test.

RESULTS

A total of 52 patients were included in the present study after obtaining informed consent, 26 patients in each group. The mean age of patients in UM group was 38.77±12.42 yrs, and the BPAD group was 41.15±12.47yrs. The younger age of onset was noted among UM group (25.62±5.31) compared to the BPAD group (28.69±6.29). (Table 1)

Table 3: Morbidity details compared between unipolar mania and bipolar disorder

Variable	Unipolar Count(%)	Bipolar Count (%)	Chisquare (p-value)
Psychotic symptom in first episode	14(53.8)	15(57.7)	0.078 (0.78)
Rapid cycling	0(0.0)	0(0.0)	-
Seasonality	6(23.1)	2(7.7)	2.364 (0.124)
Suicidal attempts	7(26.9)	10(38.5)	0.787 (0.375)
Co morbid anxiety disorder	14(53.8)	17(65.4)	0.719 (0.397)
Co morbid substance use disorder	12(46.2)	15(57.7)	0.693 (0.405)
Co morbid medical illness	7(26.9)	9(34.6)	0.361 (0.548)

Table 4. Comparison of number of episodes and Childhood Trauma Questionnaire (CTQ) score between unipolar mania and bipolar disorder

Variable	Unipolar Mean (SD)	Bipolar Mean (SD)	t- value	p- value
No of episodes	6.814.27	5.733.53	1.011	0.317
No. of psychotic episodes	33.5	22.4	0.275	0.784
Mood congruent psychotic episodes	33.5	2.772.4	0.275	0.784
CTQ Score	72.736.95	73.047.55	-0.153	0.879

In our study, both UM and BPAD groups showed male preponderance (65.4% and 61.5%, respectively) compared to females (34.6% and 38.5%, respectively). In both UM and BPAD groups, a higher incidence was observed in the rural population (88.5% and 96.2%, respectively). The majority of patients in both UM and BPAD groups attained primary and higher secondary levels of education and belonged below the poverty line (88.5% and 96.2%, respectively). UM group had a stronger family history of bipolar affective disorder and hyperthymic temperament (76.9% and 61.5%, respectively). However, no statistically significant difference was noted between the two groups in the determinants mentioned above. (Table 2)

Psychotic symptoms in the first episode, suicidality, comorbid anxiety, substance use and medical illness, were more common among the BPAD group, whereas seasonality was more common among UM group. However, no statistically significant difference was noted between the two groups in the determinants mentioned above. (Table 3)

There was no significant difference between the two groups with respect to the number of episodes, number of psychotic episodes and mood-congruent psychotic episodes. The CTQ score was almost similar in both groups; however, this finding was not statistically significant. (Table 4)

DISCUSSION

This study was conducted to understand whether Unipolar Mania constitutes a distinct diagnostic entity with unique clinical features and clinical course. If it is unique, then the treatment and prognosis will also change significantly from Bipolar Affective Disorder. In 1970, Robins and Guze proposed five criteria to examine apparent relatedness of disorders to one another[18,] i.e., similar clinical features, laboratory studies, familiality, course of illness and high comorbidity among disorders. To understand their characteristics, we decided to study some of these criteria in patients with Unipolar Mania and compare them with Bipolar Affective Disorder.

In our study younger age of onset was noted among UM group compared to the BPAD group; however, no statistically significant difference was noted between the two groups. In a study from Turkey, Yazici et al. reported that patients with Unipolar Mania had significantly earlier onset than patients with episodes of mania and depression.[12] Even Yazici et al. dismissed their finding due to small differences in the figures. Khanna et al. from Ranchi also reported no significant differences in age of onset between the recurrent mania group and the Bipolar Affective Disorder group.[19] Other studies also have not reported any significant differences regarding the age of onset between groups.[7]

In our study, both groups showed male preponderance; however, gender differences have been inconsistent, with some early research revealing a male preponderance[20] but other researchers have found no difference between the sexes.[19, 21, 22] Majority of our study population had attained a primary and higher secondary level of education, belonged to below poverty line and were unemployed however no significant difference was noted between the two groups. Similar to the trends in our study, other studies also have shown no significant difference between the two groups with respect to educational and occupational status.[7, 12]

In the present study, patients with Unipolar Mania had a stronger family history of Bipolar Affective Disorder and hyperthymic temperament; however, no statistically significant difference was noted between the two groups. Oddly Abrams et al. reported a significant morbid risk of Unipolar Depression in relatives of Unipolar Mania.[23] It is rather difficult to speculate what Unipolar Mania has in common with Unipolar Depression than Bipolar Affective Disorder. However, our study findings are in agreement with studies by Nurnberger et al., Pfohl et al., Aghanwa et al., all of whom reported that the morbid risk of psychiatric illness in first degree relatives to be similar in both groups; however, finding failed to reach a significant level.[7,21,22]

In our study, there was no rapid cycling observed in the 52 patients from both groups. In a study from Tunisia, Amamou et al. reported that the rapid cycling phenomena were comparable between the two groups.[24] Psychotic symptoms in the first episode, suicidality, comorbid anxiety, substance use and medical illness, were more common among the BPAD group. In contrast, the seasonality was more common among UM group in our study. In the BiD-CoIN study, Grover et al. reported that UM patients had higher rates of having at least one episode with psychotic symptoms in their lifetime but had lower rates of lifetime history of suicide

attempts.[9] A Indian study published by Avasthi et al. reported that 11 out of 50 patients with recurrent manic episodes met the criteria for seasonal affective disorder and had onset in summer or winter rather than autumn or spring.[25] Whereas Mittal et al. concluded that lower seasonality among the Unipolar Mania group suggests a distinct course from Bipolar Affective Disorder patients.[26]

The occurrence of depressive episodes in patients with Bipolar Affective Disorder can produce negative cognitions and despair, leading to more suicide attempts than the Unipolar Mania group. This has been conjectured in the study by Amamou et al., where the only variable found to be significantly different between the Unipolar Mania group and the Bipolar Affective Disorder group was the average number of suicide attempts.[24] However, our study did not find any statistically significant difference though marginally higher in the BPAD group.

In our study, the number of psychotic episodes and mood-congruent psychotic episodes were similar in both groups. The study by Yazici et al. reported that patients with Bipolar Affective Disorder tended to have more psychotic features and mood incongruent psychotic episodes than patients with Unipolar Mania.[12] In our study, the CTQ score was almost similar in both groups. A similar study in the Indian population reported no difference in self-rated childhood trauma between UM and BPAD groups.[17]

In our study, we had a small sample size, limiting the inferences drawn from the study. This study was hospital-based, so inferences cannot be extrapolated to the population in the community. It was also a cross-sectional study which has its limitations. There is a possibility of recall bias, and hence depressive episodes and dysthymia perhaps went unnoticed.

Conclusion

Our study suggests no significant differences between the Unipolar mania (UM) group and Bipolar Affective Disorder (BPAD) group with respect to clinical and socio-demographic variables. Perhaps Unipolar Mania cannot be postulated as a distinct nosological entity. Maybe these patients with Unipolar mania didn't have time to develop a depressive episode yet, and they might develop a depressive episode sometime during their lifetime. Unipolar mania could be hypothesised as a course specifier similar to how rapid cycling or seasonal affective disorder or peripartum mood disorder is considered a course specifier instead of a separate nosological entity. This needs to be researched further. Future research can be strengthened on this topic by establishing consensus on the definition of Unipolar Mania. Long term follow up studies are needed to understand the course of these patients.

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Nil

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