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Original Research Article

A Comparative Study of Depressive Episode in Major Depressive Disorder and Bipolar Disorder

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Abstract: Distinguishing between major depressive disorder (MDD) and bipolar disorder is important because there are differences in the optimal management of these conditions. Antidepressant treatment of bipolar depression (BPD) can adversely affect long-term prognosis by causing destabilization of mood and more frequent depressive episodes, and can lead to the development of treatment resistance. Most people with bipolar disorder experience depression rather than mania as their first episode of illness. It is clinically desirable to recognize, or at least to suspect, bipolar depression at an early stage of a bipolar illness. The objective of our study is comparison of depressive episode in major depressive disorder and bipolar affective disorder in a tertiary care general hospital, psychiatry unit**.** Eighty cases of unipolar depression and 54 cases of bipolar depression were compared on the basis of socio-demographic profile, family history of mood disorder and clinical features using semi structured questionnaire for socio-demographic profile, validated Bengali version of Beck Depression Inventory (BDI). At the end of the study, we find that bipolar depression (BPD) is characterized by early age of onset, more number of previous episodes, positive family history, more severe in nature associated with prominent features of guilt feeling, self dislike, self accusation, suicidal ideas, irritability, social withdrawal, fatigability and loss of libido. Major depressive disorder shows female preponderance, more number of stressful life events before episodes. Body image change, insomnia, anorexia, weight loss, somatic pre-occupation are more in unipolar depression.

Keywords: Comparative study, major depressive disorder, bipolar disorder, unipolar depression, bipolar depression, Beck Depression Inventory (BDI)

INTRODUCTION

Depressive disorders are among the most frequent psychiatric illnesses both in the community and in the psychiatric settings. In addition to their frequent and serious complications (e.g. suicide and substance use disorder), they are strongly associated with limitations in well-being and daily functioning that are equal to or greater than those of several chronic medical conditions.

At present unipolar major depression is estimated to constitute the fourth largest threat to mankind's quality of life, and bipolar disorder the twenty second [1]. In the year 2020, the former will likely be the second largest source and the latter the 18th source of human morbidity [2]. Major depressive episodes (MDE) are characteristics of both major depressive disorder (MDD) and bipolar disorder. Diagnostic criteria rely on clinical features and the presence or absence of manic or hypomanic episodes to distinguish between the two diagnoses.

Opinions on the psychopathological characteristics of a depressive episode in unipolar and bipolar depression have evolved over time. Emil Kraepelin considered the clinical manifestations of unipolar melancholy and depression to be identical during the course of manic- depressive disorder and that the only way to distinguish between them was to observe the long term manifestation of the disease.

Most contemporary researchers are of the same opinion [3, 4]. However, an increasing body of clinical observation and research findings indicate that the course, symptoms, genetic characteristics and response to treatment of unipolar and bipolar depressive episodes differ [5].

Major depression is often the first presentation of bipolar I and bipolar II disorder and it would obviously be an advantage if we could predict from the beginning whether an individual has bipolar depression before the appearance of hypomania or mania [6].

Distinguishing between major depressive disorder and bipolar disorder is important because there are differences in the optimal management of these conditions. Antidepressant treatment of bipolar depression can adversely affect long-term prognosis by causing destabilization of mood and more frequent depressive episodes, and can lead to the development of treatment resistance. Most people with bipolar disorder experience depression rather than mania as their first episode of illness. It is clinically desirable to recognize, or at least to suspect, bipolar depression at an early stage of a bipolar illness. The main focus is comparative study of socio-demographic profile, family history and clinical features of those depressed patients with the diagnosis of major depressive disorder and bipolar disorder.

METHODS

Ethical clearance from the institutional ethics committee and permission from the appropriate authority have been obtained. All consecutive patients, who have given informed consent and diagnosed as having Unipolar (Major Depressive Disorder and Recurrent type Major Depressive Disorder) and Bipolar depression at Psychiatry Out Patient Department (OPD) on the basis of case history, mental status examination and Mini International Neuropsychiatric Interview (MINI) and DSM-IV TR criteria have been further assessed. Socio demographic data and family history have been obtained using a semi-structured questionnaire. For assessment of socio-economic status of the family, Kuppuswamy scale (based on education and occupation of head of the family) was used. For stress factor assessment preceding the onset of illness, positive stress factor indicates presence of any stress enlisted in Presumptive Stressful Life Events Scale (PSLES) [7]. Beck Depression Inventory (BDI) in validated Bengali version [8] has been administered to the patients to rate the severity of depression. The patients received management in the form of pharmacotherapy or psychotherapy or both. In the current study, 80 cases of unipolar depression and 54 cases of bipolar depression were included in the study.

RESULTS

The mean of current age in Bipolar Depression group is 35.59 yrs and in Major Depressive Disorder is 33.96 yrs (p value 0.35). In Major Depressive Disorder group the female population is more in number than male population (p: 0.01). The number of illiterate and low level of education is more in bipolar depression group (p: 0.004). Unemployment is significant in Bipolar Depression population (p: 0.03). There is no statistically significant difference between the two population on habitat, marital status, religion, socioeconomic status, type of family, comorbid medical illness. The mean age of onset of illness in unipolar group is 33.38 years and in bipolar group it is 25.07 years (p: 0.001). Bipolar depression group shows more number of previous depressive episode (p: 0.001) and positive family history of mood disorder (p: 0.001) compared to unipolar depression. Regarding stressful life events, presence of stress indicates those who responded yes to items enlisted in PSLES [7]. It is more common in unipolar depression than bipolar depression (p: 0.001). Considering post partum onset of mood episode and associated psychotic symptoms, we could not find any major difference between the groups. The mean score on BDI scale, of unipolar depression group is 26.46 and of bipolar depression group is 38.88 (p: 0.001).

Guilt feeling self-dislike, self-accusation, suicidal ideas, irritability, social withdrawal, fatigability and loss of libido are prominent in bipolar depression group and this difference is significant with unipolar depression. Body image change, insomnia, anorexia, weight loss, somatic pre-occupation are more in unipolar depression than bipolar depression in a statistically significant way.

Table−1: Summary of results on different parameters of socio-demographic profile & family history

Variables	Unipolar depression (n=80)	Bipolar depression (n=54)	p-value	Conclusions
Current age (mean)	33.96	35.59	0.35	No significant difference between groups on current age.
Sex ratio	M:30, F:50	M:32, F:22	0.01	Female pts are **significantly** more in Unipolar group
Habitat	Rural : 59 Urban : 21	Rural : 40 Urban : 14	0.96	No significant difference between groups on habitat.
Marital status	Single : 29 Married : 51	Single : 12 Married : 42	0.1	No significant difference between groups on marital status.
Religion	Hindu : 27 Muslim : 53	Hindu : 12 Muslim : 42	0.14	No significant difference between groups on religion.
Education	Illiterate : 17, Educated : 63	Illiterate : 24, Educated : 30	0.004	Level of education is **significantly** better in Unipolar group
Occupation	Employed : 34 Unemployed : 46	Employed : 12 Unemployed : 42	0.03	Unemployment is **significantly** more in Bipolar depression.
Type of family	Nuclear : 63 Others : 17	Nuclear : 38 Others : 16	0.52	No significant difference between groups on type of family.
Socio economic status (SES)	Lower : 63 Middle : 17	Lower : 44 Middle : 10	0.69	No significant difference between groups on SES.
Stressful life events (SLE)	Yes : 52 No : 28	Yes : 6 No : 48	0.01	SLEs are **significantly** present in Unipolar group
Age of onset (mean)	33.38	25.07	0.01	Bipolar group shows **significantly** younger age of onset
Past episodes	Yes : 6 No : 74	Yes : 54 No : 0	0.001	Bipolar group shows **significant** past episodes.
Comorbid medical illness	Yes : 28 No : 52	Yes : 14 No : 40	0.26	No significant difference between groups on comorbidity.
Post partum onset	Yes : 2 No : 78	Yes : 5 No : 49	0.09	No significant difference between groups on post partum onset.
Psychotic symptoms	Yes : 6 No : 74	Yes : 11 No : 43	0.08	No significant difference between groups.
Family h/o psychiatric illness	Yes : 16 No : 64	Yes : 36 No : 18	0.001	Positive psychiatric family history is **significant** in Bipolar group.

Table−2: Summary of results from BDI scale 21 items

Serial No	Items	p value	Conclusions
A.	Sadness	0.16	Not significant
B.	Pessimism	0.58	Not significant
C.	Sense of failure	0.35	Not significant
D.	Dissatisfaction	0.07	Not significant
E.	Guilt	0.001	BPD > MDD
F.	Expectation of punishment	0.001	MDD > BPD
G.	Self dislike	0.014	BPD > MDD
H.	Self accusation	0.01	BPD > MDD
I.	Suicidal ideas	0.001	BPD > MDD
J.	Crying	0.16	Not significant
K.	Irritability	0.001	BPD > MDD
L.	Social withdrawl	0.001	BPD > MDD
M.	Indecisiveness	0.01	BPD > MDD
N.	Body image change	0.02	MDD > BPD
O.	Work retardation	0.001	BPD > MDD
P.	Insomnia	0.001	MDD > BPD
Q.	Fatigability	0.001	BPD > MDD
R.	Anorexia	0.02	MDD > BPD
S.	Weight loss	0.003	MDD > BPD
T.	Somatic preoccupation	0.01	MDD > BPD
U.	Loss of libido	0.001	BPD > MDD

DISCUSSION

Regarding sex distribution, the unipolar depression group has large number of female cases (nearly 1.5 times than male) which is almost consistent with the result of the National Comorbidity Survey Replication study [9]. In Bipolar Depression group the male population outnumbered female, which does not go with the findings of previous research [9,10]. Previous work results vary from male female ratio 1:1 to more common in female than male. The mean current age for both the group varies insignificantly. This finding aids little to the comparison. But regarding age of onset, it is significantly different in both the groups. It is 25 yrs for BPD and 33 yrs for MDD and the difference of mean is 8 yrs. The findings of bipolar group are consistent with another Indian study [11] where the mean age of onset is 27 yrs. The difference age of onset of both the group matches with other study findings [12, 13]. Considering marital status, most of the cases of both study group are married. 51 cases of 80 MDD cases and 42 cases of 54 BPD cases are married. There is no statistically significant difference between the two groups on marital status. This finding is not corroborative with previous research [14] where single (unmarried, divorced, widow) subjects were more prone to develop depressive disorder. Regarding stressful life events, Major Depressive Disorder group significantly outnumbered Bipolar Depression. The finding corroborates with previous study [14] that concludes: "In Unipolar Depression, negative life events are often present before the onset, but with Bipolar disorder the relationship with life events is unknown". Regarding previous episode of mood disorder, bipolar depression subjects have significantly higher number of episodes than MDD. This supports the study result [13]: "Bipolar depression was associated with family history of bipolar disorder, an earlier age at onset, a greater previous number of depressive episodes," In Unipolar Depression group, Recurrent type Major Depressive Disorder shows previous episodes of depression. Regarding education and occupation, illiteracy, low level of education and unemployment are more common in Bipolar Depression group. This can be explained by early age of onset of illness, family member suffering from psychiatric disorder, multiple number of episodes and persistent nature of depressive episode in Bipolar group. Considering family history of psychiatric illness, Bipolar Depression group has significantly positive family history of psychiatric disorder than Major Depressive Disorder group and this corroborates with past research findings [13, 15]. The subjects included in the study are mostly from rural area and Muslim by religion and belong to lower socio-economic status. This finding can be explained by the nature of the population attending the OPD of the hospital. The patients seeking treatment in this tertiary care hospital are mostly from rural areas of North-24-Parganas of West Bengal. There is no statistically significant difference between the two study group on the basis of habitat, religion, socio-economic status, type of family and co-morbid medical illness. Apart from early age of onset of illness in bipolar depression group, as already discussed before, Bipolar depression group shows more number of post-partum onset of illness than unipolar group (though the result is not statistically significant). As mentioned in one standard textbook [12] of psychiatry, postpartum onset of depressive episode is indicator of developing bipolar disorder in long term course of illness. Presence of psychotic symptoms along with depression are more in Bipolar Depression group than Major Depressive Disorder or Unipolar group though the finding is not statistically significant. Earlier studies [16] indicate more frequent psychotic symptoms in Bipolar Depression relative to Unipolar Depression. Considering severity of depression, the scores on BDI scale were always higher in bipolar depression group than Unipolar Depression in a significant manner. This finding is not corroborative with other studies. Previous study [17] reported no significant difference in episode severity as measured using symptom interviews between Bipolar and Unipolar Depression with the exception of Bipolar Depressed participants exhibiting greater short term mood variability. Regarding sadness and pessimism, there was no significant difference between Unipolar and Bipolar depression in this study. But in large multi-centric trial [13], Perils *et al.* found statistically significant difference from the previous mentioned two items between MDD and BPD group. Regarding suicidal thought, the result of this study is corroborative with the mentioned study. In another study [17] by Lestar *et al.* 1993 found no consistent difference across group for suicidality. The results on guilt feeling, self dislike and self accusation are significantly more prominent in Bipolar Depression group which could explain their suicidal ideations. Irritability, social withdrawal, work retardation and fatigability are obvious features in bipolar depression group. Regarding irritability, in a standard textbook [12] of psychiatry, it has been mentioned that depressive mixed state (i.e associated psychomotor excitement, irritable hostility, racing thoughts and sexual arousal during major depression) are more suggestive of bipolar disorder. Our current study result also indicates that. Social withdrawal, psychomotor retardation and easy fatigability are unique features of

Bipolar depression and consistent with previous study [18] that reports, " Psychomotor slowing, self-blaming/feelings of worthlessness, increased appetite, leaden paralysis/loss of physical energy, and weight increase were significantly more frequent in Bipolar depression than in Unipolar depression." Body image change and somatic preoccupation is more in MDD group. Specifically Unipolar depression is associated with more prevalent anxious mood state, activity and somatisation, suggesting a pattern of great anxiety [17]. Insomnia, anorexia and weight loss are predominantly present in unipolar depression group. All previous study [19- 21] concluded that atypical features (hypersomnia, hyperphagia and weight gain) are present in Bipolar depression. As BDI does not encompass reverse vegetative symptoms, conclusion cannot be drawn about atypical features and bipolar depression from this study. Loss of libido is marked in bipolar depression group and this finding is consistent with another previous study [22] where genital symptoms were significant in bipolar depression group.

CONCLUSIONS

A large number of studies have been conducted worldwide to differentiate clinical features of unipolar and bipolar depression. Any single characteristic or symptom is not pathognomonic of a particular disorder. All the findings of previous studies improve our ability to suspect or detect underlying bipolarity in a subject presented with first depressive episode.

In the current study, we find that bipolar depression (BPD) is characterized by early age of onset, more number of previous episodes, positive family history, more severe in nature associated with prominent features of guilt feeling, self dislike, self accusation, suicidal ideas, irritability, social withdrawal, fatigability and loss of libido. Major depressive disorder shows female preponderance, more number of stressful life events before episodes. Body image change, insomnia, anorexia, weight loss, somatic pre-occupation are more in unipolar depression.

LIMITATIONS

Our study is not beyond limitations. First, this is a hospital based study and subjects were selected from Psychiatry OPD of a tertiary care general hospital. Previous study comparing these disorders involved large number of sample from hospital / clinic as well as community. Second, the subjects included in the study were not medication naïve. Medication has significant influence on clinical features and course of illness. Third, atypical depressive symptoms or reverse vegetative symptoms are more common in Bipolar Depression. Beck Depression Inventory does not Encompasses reverse vegetative symptoms. Hamilton Depression Rating Scale would be better option in this study. Lastly, substance use and comorbid psychiatric symptoms (like anxiety) have not been considered in this study. These factors have significant role in course and outcome of a disorder.

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