RESEARCH ARTICLE

A cross-sectional comparative study of functioning in patients with bipolar depression and patients with unipolar depression

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ABSTRACT

Background: Bipolar affective disorder is an episodic illness in which patient suffers from unexpected change in affect like elated mood episode (mania) followed by either depressed mood with period of inter episode euthymia. The disease in comparison to unipolar depression starts in early thirties, more severe symptoms and with more detriment in functioning and wellbeing. Aim and Objectives: The present study assess the level of global functioning of bipolar depressive patients in different domains and data compared with unipolar depressive patients. Materials and Methods: This study was done at a tertiary center in India. The study included 30 patients with bipolar depression in study group and 30 patients with unipolar depression included in control group. In all the patients of both groups, relevant scales, that is, back depression inventory and global assessment of functioning (GAF) were applied. These data were statistically analyzed by SPSS software. Results: On Comparison of global assessment of functioning scores between both groups the GAF score in bipolar depressive patients (SD ± 50.03 [4.75]) had significantly lower score as compared to unipolar depressive patients (62.37 [SD ± 11.50]), also patients show significant negative correlation. (−0.559) of GAF score and total Beck Depression Inventory score in case group (bipolar depressive patients). Conclusion: These findings of greater impairment in global functioning may be interpreted by understanding that life of patients with bipolar depression also complicated by having episode or episodes of manic symptoms in addition to their depressive episodes while patients with unipolar depression are experiencing depressive episodes only.

KEY WORDS: Functioning; Bipolar Affective Disorder; Depression

INTRODUCTION

Bipolar affective disorder is a debilitating mental disorder which is typified by cycles of different affective states like elevated affect (Mania) and depressed affect with a period of normal mood state in between the episodes. It is relatively a common psychiatric disorder which is manifested in early thirties with equal prevalence in both sexes of about 0.6% (0.5–0.7%) in India.[1] According to the WHO report on disability 2011 bipolar disorder ranks 12 in top 20 list of moderate and severe disability.[2] MacQueen et al. studied the psychosocial outcome in bipolar affective disorder and found that thirty to sixty percent of patients of bipolar affective disorder have impaired occupational and social functioning as compared to their premorbid level of functioning in these domains.[3] Individuals with bipolar disorder experiences more trouble with depressive episodes in comparison to manic or hypomanic episodes. In comparison to unipolar depression bipolar depressive episode is more severe in nature, endogenous in type, starts in early ages and difficult to

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diagnose by clinician. Often initial one or two episodes are of depressive type and treating these episodes with conventional antidepressant will result in manic switch in individual. A prospective, systematic 20-year long naturalistic study done by Judd et al. shows that greater psychosocial detriment with increase severity in depressive symptom for bipolar affective disorder. Depressive symptoms which are major part of bipolar illness are comparatively causing more disability than episode of mania and even subtle or residual depression are causing detriment in personal, social, and occupational functioning.\(^4,5\)

Bipolar depression also causing more morbidity and mortality in affected patients. Higher incidence of suicide and substance abuse with physical comorbidities and other mental illness like anxiety disorders, personality disorders are also common in BPD patients with depressive episodes.\(^6\) Hence, bipolar depression is causing more disability and health related risk as compared to manic episodes. It is essential for clinician to diagnose bipolar depression precisely and not to be confused with unipolar depressive episode as treatment plan for depressive episode in bipolar affective disorder is totally different from treatment of unipolar depressive episode. Typical antidepressants are not used in patients with bipolar depression. Mood stabilizers such as lithium, lamotrigine, and selected atypical antipsychotics are used to treat patients with bipolar depression.\(^7\)

**Aims and Objectives**

1. To determine the global assessment of functioning (GAF) between bipolar depressive patients (study group) and unipolar depressive patients (Control group).
2. To compare obtained score between study and control group.

**MATERIALS AND METHODS**

It is an analytically type of study conducted at Psychiatry Centre, Sawai Man Singh Medical College, Jaipur. Study was started after taking approval from Principal and controller, SMS Medical College. There is no ethical issue as proper approval was taken from Institutional ethics committee. For this study, patients were equally divided into study and control group. In first group which constitute study group, 30 patients who were suffering from bipolar depression and in second group which constitute control group 30 patients who were suffering from unipolar depression were taken. Patients who were in remission phase of their illness (diagnosed as per ICD-10) with minimum 2 years duration were included in study. Diagnosis also confirmed by two consultant psychiatrists. After giving information about this study, written consent was taken from the subjects and relatives. Patients were taking their ongoing treatment and no change was made in any patients for inclusion in the study. Detailed history was taken in all patients and their identification data, economic and social status, literacy, and relationship status was documented in study proforma. Before taking subjects in study other physical, psychiatric and substance use disorder was excluded in all patients.

**Inclusion and Exclusion Criteria**

Literate Patients of either sex of 18–60-years-old, diagnosed as per ICD-10 with minimum 2 years of illness, disease severity level moderate or severe depression (score more than sixteen on Beck Depression Inventory [BDI] Scale) For study group, patients confirmation of history of at least one manic episode must be taken. Subjects not willing for participation and suffering from any other illness (Physical or mental) were not taken.

**Data Analysis**

The obtained data were analyzed by administering appropriate statistical methods. Frequency percentage-test, Chi-square test, and Pearson coefficient of variance were used for both study and control group.

**Tools of Study**

1. **Proforma to document basic information of patients** which includes the information as follows:
   a) Information such as name, age, sex, employment, literacy level, relationship status, financial and social status.
   b) Illness history including past illness, treatment taken, past personal and family history.
   c) Any other comorbid illness or addiction to any substance.

2. **BDI**

This inventory was developed to assess depression severity and this inventory also assesses behavioral and cognitive domain of depressive patients. The BDI specially designed to use both by interviewer who selectively puts item and patient decides the most appropriate answer for that item. Hence, it is different from self-rating scales and easy to administer. This inventory may be used by patient for self-rating of severity of illness. The Beck Depression Inventory has high reliability and validity. It also gives similar results as compare with Hamilton rating scale except for patients suffered from severe depression. The Beck Depression Inventory having 21 items, every item scores zero to three. Total fifteen items for psychical domain of the patient and rest six items assess the somatic domain of the patient. Patient asked regarding each item and patient answer as his/her past week experience. The scale is easy to use for frequent repetition. The
Beck Depression Inventory having correlation of 0.62 with global judgments. A score of 0–9 is considered normal range, 10–15 is considered mild depression, is considered moderate depression, and is considered severe depression.

3. GAF Scale

It is developed in 1987. It have two separate scale systems, single and dual. Both single and dual scale systems are used by clinician worldwide. In both scale system 100-point scoring used. This 100-point scale is further divided in 10 subsections of 10 points each (Like 91–100, 81–90, 71–80). Higher score suggests superior functioning while less score indicate impaired functioning. The GAF score is not a fix number it continuously changes in a very a single patient in different course of illness. Reporting clinician about highest and lowest GAF score during recent past with available current GAF score will give an idea of patients overall functioning. Jones et al. assessed 103 patients at monthly intervals. Overall, GAF score were compared with medication changes and patients need for that time and found adequate reliability for total score and symptoms. Moos et al. found that we predict GAF score of patients as per their illness type and severity. Initially, this scale used in DSM-IV for assessment of functioning in Axis four Which is now replaced with WHO-DAS 2.0 scale.

RESULTS

Observations of the present study are depicted in Tables 1-5.

DISCUSSION

Our present study aimed to find out the extent of GAF value in depressive episodes of patients with bipolar affective disorder and data compare to unipolar depressive patients. Our main finding is that patient with depression had less global functioning, and this impairment is more severe in patients with bipolar depression. Our finding also confirms the outcome of previous research studies. Comparison of both groups shows that patients in case group (Bipolar Depressive patients) were having more statistically significant severe depressive symptoms (BDI score [±SD] −35.67 [±5.83], chronic nature [73.33% patients having duration of illness more than 5 years]) and history of psychiatric illness in family (36.67%) as compare to unipolar depressive patient group (BDI score 25.13 [±6.80], only 36.66% patients having duration of illness more than 5 years) and 6.67% history of psychiatric illness in family. This shows that bipolar depression is more severe on comparison to bipolar depression. On comparison of GAF value in study and control groups the GAF score in bipolar depressive patients (SD ± 50.03 [4.75]) had significantly lower score as compared to unipolar depressive patients (62.37 [SD ± 11.50]) shows unipolar depressed patients had better functioning on GAF scale than bipolar depressed patients. By using Pearson’s test among GAF value and social and demographic factors in both group patients, nothing found significant except only in study group patients household income had significant correlation with GAF value. No correlation was found out among GAF value and clinical distinctive factors in study and control group patients. While assessing correlation among GAF value and seriousness of disease it is found out that aggregate value of BDI had a negative correlation among GAF and aggregate BDI value in study group and positive correlation among GAF and aggregate BDI value in control group patients. Correlations of GAF value with quality of life in both group patients shows that in study group (bipolar depressive patients), there was positive correlation among GAF value and somatic part of QOL (0.39) and aggregate value (0.37). Whereas in control group patients GAF value

<table>
<thead>
<tr>
<th>Variables</th>
<th>GAF value (control group)</th>
<th>GAF value (study group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in (years)</td>
<td>0.117</td>
<td>−0.096</td>
</tr>
<tr>
<td>Sex</td>
<td>0.209</td>
<td>0.029</td>
</tr>
<tr>
<td>Marital Status</td>
<td>−0.067</td>
<td>−0.043</td>
</tr>
<tr>
<td>Occupation</td>
<td>0.170</td>
<td>0.150</td>
</tr>
<tr>
<td>Education</td>
<td>0.136</td>
<td>0.130</td>
</tr>
<tr>
<td>Monthly Income</td>
<td>0.274</td>
<td>0.193*</td>
</tr>
<tr>
<td>Religion</td>
<td>−0.559**</td>
<td>−0.002</td>
</tr>
<tr>
<td>Family type</td>
<td>−0.373</td>
<td>−0.084</td>
</tr>
<tr>
<td>Locality</td>
<td>−0.379</td>
<td>0.024</td>
</tr>
</tbody>
</table>

GAF: Global assessment of functioning

<table>
<thead>
<tr>
<th>Variables</th>
<th>GAF value (control group)</th>
<th>GAF value (study group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease length</td>
<td>0.180</td>
<td>−0.123</td>
</tr>
<tr>
<td>History of mental illness in household</td>
<td>0.125</td>
<td>−0.213</td>
</tr>
</tbody>
</table>

GAF: Global assessment of functioning

<table>
<thead>
<tr>
<th>BDI</th>
<th>GAF value (r) Unipolar depression (N-30)</th>
<th>GAF value (r) bipolar depression (N-30)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.730**</td>
<td>−0.559**</td>
</tr>
</tbody>
</table>

*P<0.005: Statistically significant difference; **P<0.001: Statistically highly significant difference. GAF: Global assessment of functioning
Further prospective studies. Subsyndromal depressive symptoms are [4,12] Psychosocial disability in the course [14,15] Relationship. Cognition and functioning in [16] Aggregate Value −0.51* Family burden was positively correlated with somatic (0.51), psychical (0.59) and aggregate value (0.56). Among GAF value with family burden in both groups Family burden was significantly negatively correlated (−0.51) with GAF value in study group patients while in control group patients it was positively correlated (0.40) of total GAF value with Family burden.

In our study, we found greater functional impairment in bipolar affective disorder patients suffering from depressive as compared to patients suffering from depressive episodes alone which is in line with other studies.[14,12] Rosa et al. also found that detriment in functioning are predictor of more chronic and debilitating illness observed in Bipolar Depression and greater impairment as severity of illness increases.[13] The present Study also reveal more functional impairment with severe depressive episodes as seen frequently in bipolar affective illness, which is in line with previous studies.[14,15]

Bipolar depression is often a diagnostic dilemma to clinicians especially for general practitioners. The first episode in majority of patients is depressive episode.[16] Treating bipolar depression with conventional antidepressant usually causes emergence of manic symptoms in these patients which is often difficult to treat especially in young ages. Our present study gives insight regarding this illness and explains that patients with bipolar depression suffer more severe illness and functional impairment as compared to unipolar depressive patients. Our present study was having few limiting factors also it is a cross sectional study in which among bipolar depressive patients only limited patients with depressive episodes were assessed. Studies also show that even in remission, with manic symptoms and subsyndromal depressive symptoms also causes functional impairment in bipolar depressive patients.[17,18] Further prospective studies needed to assess global functioning in all phases of bipolar illness with a greater number of patients.

**CONCLUSION**

These findings of greater impairment in global functioning may be interpreted by understanding that life of patients with bipolar depression also complicated by having episode or episodes of manic symptoms in addition to their depressive episodes while patients with unipolar depression are experiencing depressive episodes only. In addition, patients with bipolar depression experiencing more severe depression, having more lethargic symptoms, onset at early age which greatly affects their employment status and more chances of similar symptoms in family members further complicate their financial and social conditions.

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