Managing Bipolar Affective Disorder in a Tribal District of Odisha

Dheeraj Kattula¹², Jayaprakash Russell Ravan³, Munaf Babajan Nandyal¹

ABSTRACT

Background: Managing any chronic illness in marginalized communities in resource-poor settings is always a challenge. Lack of facility to monitor lithium and the common morbidity of hypokalemic periodic paralysis and chronic renal failure among tribals of northern part of Odisha pose unique challenges in managing bipolar disorder. Methodology: This is a cross-sectional study done in a district-level hospital catering to predominantly tribal population. A part of the data was collected by a psychiatrist prospectively and analyzed. Historical data were obtained from medical records. Results: Out of 18 patients who had been diagnosed of bipolar/mania, 12 had received treatment with carbamazepine in the range of 400–600 mg. All but one person showed improvement. One person developed rash and had to stop the treatment. Conclusion: Carbamazepine may be used relatively safely in resource-poor settings in high-risk groups.

Key words: Bipolar affective disorder, carbamazepine, tribal

INTRODUCTION

Odisha is an Indian state with over 23% of the population being tribal.¹ Mayurbhanj district, located in the northern part of Odisha, has a tribal population of 57%.² Hypokalemic periodic paralysis has been described in predominantly tribal districts of Odisha.³ Chronic renal failure is increasingly being reported in these districts.⁴ In our district, it was the tribals who had greater burden of the problem. Their prevalence odds ratio in comparison to nontribals for hypokalemic periodic paralysis was 2.12 and prevalence odds ratio for chronic renal failure was 1.95 (unpublished hospital records).

Bipolar affective disorder is a common severe mental illness which despite a lot of research is very challenging in clinical practice.⁵ Lithium has been the gold standard in the treatment of bipolar disorder.⁶ However, the use of lithium would warrant monitoring of serum lithium level thyroid and renal function regularly.⁷ In resource-poor settings such as Mayurbhanj district where facility for measuring lithium levels does not exist and one is dealing with a group of people at high risk of kidney disease, lithium need not be the first drug of choice in the treatment of bipolar illness. We studied the hospital practice of managing bipolar disorder in such a challenging environment.

¹Department of Psychiatry, Christian Medical College, Vellore, Tamil Nadu, ²Department of Psychiatry, Kalinga Institute of Medical Sciences, Bhubaneshwar, ³Department of Psychiatry, Graham Staines Memorial Hospital, Baripada, Odisha, India

Address for correspondence: Dr. Munaf Babajan Nandyal
Department of Psychiatry, Christian Medical College, Vellore - 632 002, Tamil Nadu, India. E-mail: munaf.meghna@gmail.com

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A total of 10,271 patients were seen from January 2004 to December 2009. Among them, 18 patients had a diagnosis of manic episode/bipolar disorder, i.e., a prevalence of 0.17%. The youngest patient was 15 years old and the oldest was 51 years old. Six out of the 18 patients were excluded from the study. Two of them had cerebral malaria, one had established chronic renal failure, and one had fracture of femur, for which their care was not continued in the hospital and needed referral to higher centers. Two patients had run away after the diagnosis was made. Hence, their treatment also did not take place in the hospital.

In the 12 cases, 8 were males and 4 were females and 11 were tribal and 1 was nontribal. Eight patients were diagnosed of bipolar disorder currently mania with psychosis, one patient had bipolar affective disorder currently hypomania, and three patients had the first episode of mania, and all were associated with psychosis. All patients were treated with carbamazepine as mood stabilizer. They had received dose in the range of 400–600 mg. The mean dose was 508.33 mg (SD: 99.62). Carbamazepine levels were not measured for any of the patients. All except two needed the use of additional medications for control of symptoms. Four received olanzapine, three received risperidone, and three received chlorpromazine. Only three required augmentation with benzodiazepines.

All patients except one had shown improvement with treatment, indicating response rate of 91.67%. The one who did not show improvement was a 15-year-old adolescent who had bipolar disorder and was having mania with psychotic symptoms. He was treated for a month with carbamazepine, chlorpromazine, and diazepam, following worsening of symptoms, and so he was referred to a higher center for electroconvulsive therapy. Only one patient, a 46-year-old male, had carbamazepine-induced rash. Carbamazepine was discontinued and he was maintained on atypical antipsychotic as prophylaxis. One patient had reported weight gain. He was concurrently on olanzapine at that time. Olanzapine was later tapered and stopped.

### DISCUSSION

The prevalence of bipolar disorder is estimated to be 2.6%. The low prevalence in the hospital is more suggestive of lack of awareness about mental illness being treatable and people accessing other services due to the hospital being more known for leprosy-related work. Awareness is a more likely explanation because there were no cases of bipolar depression at all, as depressive symptoms blend more easily into distress in comparison to mania when there is greater disruption from normal state of affairs.

Lithium is the gold standard in the management of bipolar disorder. Guidelines suggest monitoring of lithium levels and thyroid and renal function at periodic intervals. There is a cost element to this standard of care and also there is an issue of availability of these tests. Lithium is known to cause renal damage in the long run. The tribal population of Odisha has a high prevalence of chronic renal failure and hypokalemic periodic paralysis. Our hospital data showed a prevalence odds ratio of 2.12 for hypokalemic periodic paralysis and 1.95 for chronic renal failure for tribals over nontribals. It needs further exploration of why tribals are at risk for renal dysfunction.

Given that tribals are at greater risk for renal dysfunction, it was decided to use carbamazepine as mood stabilizer. Despite the fact that meta-analysis on carbamazepine shows questionable efficacy in treating bipolar disorder, experience of many clinicians does suggest a trial can benefit. Carbamazepine has a broad therapeutic window which may obviate the need for strict monitoring of serum levels unlike that of lithium. Sodium valproate could have been chosen too; however, the cost of sodium valproate would limit its use in economically backward population.

The incidence of carbamazepine-induced rash is estimated to be about 10%. In our study, the
incidence was 8.33%, which resolved when drug was discontinued. It is mandatory for us to warn patients about rash when we prescribe carbamazepine.

We have a tendency to repackage Western programs and guidelines without understanding the local challenges. We need to modify expert recommendations to suit our local needs and diligently use the scientific method to generate evidence to inform local guidelines.

CONCLUSION

It can be concluded that carbamazepine is relatively safe and an efficacious first-line mood stabilizer in the special population of tribals in resource-poor settings in tribal districts of Odisha.

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Conflicts of interest
There are no conflicts of interest.

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