CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

http://doi.org/10.5281/zenodo.1279320

Available online at: http://www.iajps.com Research Article

STUDY TO FIND ACCURATE DRUG AGAINST BIPOLAR DISORDER

[1]Dr. Sumera Rana, [2]Dr. Salma Sadia,[3]Dr. Sara Ijaz
[1]WMO, BHU Kachi Shahani, Bhakker.
[2]WMO, BHU Mateela, Sargodha.
[3]WMO, Allied Hospital, Fasilabad.

Abstract:
Objective: *With remarkable effect on health, bipolar disorder (BD) has become a critical concern in medical. This disease has been categorized as recurring and chronic. Due to its cognitive damages, functional impairments and increasing morality it been a leading disability in teenagers. The factor behind higher morality comprises its vastness to non-psychiatric and psychiatric medical possessions.*
Patients and Methods: *On time and precise diagnosing is not possible in medicinal treatments. The diagnosis of BD includes generic indications, bleak occurrence and temper obligation. Therefore, detecting hypomanic indications and long term quantifiable assessments are decisive to distinguish BD from other situations. Early and optimal treatments based on pure evidences to a patient can be the best strategy adopted to cure it. The assessment-based modeling of noted indications was done to discover symptoms of bipolar disorder. This helped to contest the vast range of indications previously noted. The most commonly used agents were investigated to check their curative effeteness on patients.*
Results: *The present study analyzed several indications of data that included medicinal record and symptoms.*
Conclusion: *The clinical record helped to understand the disease nature and its levels in different patients. The effective medication and digital analysis can help to determine disease level in patients.*
Keywords: *Health, medical, disease, functional impairments, morality, disability, psychiatric, hypomanic, indications, modeling.*

***Corresponding author :**
Dr. Sumera Rana,
WMO,
BHU Kachi Shahani,
Bhakker

QR code

Please cite this article in press Sumera Rana et al., ***Study to Find Accurate Drug against Bipolar Disorder,*** *Indo Am. J. P. Sci, 2018; 05(05).*

INTRODUCTION:

Bipolar scatters incorporate a few issues of feeling, vitality and fictional that are portrayed by biphasic state of mind scenes of madness or hypomania and wretchedness and are communicated as intermittent scenes of changes in vitality levels and conduct [1]. Intellectual side effects, particularly adjusted response time, verbal and visual memory and official capacity, are exceptionally predominant in patients and add to disability [2]. Bipolar disarranges have been customarily ordered either as a component of the range of psychoses (particularly as a major aspect of the most serious end of the range, which relates to the exemplary idea of manic– depressive psychosis) or as an inclination issue (a full of feeling issue), conceivably as a continuum from unipolar misery to bipolar illness [3,4]. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM 5) made a classification for 'Bipolar and Related Disorders'; in this manner, bipolar disarranges are not arranged under either maniacal clutters or emotional disorders. Bipolar scatters are subclassified as bipolar I issue, bipolar II issue, cyclothymia and remaining classifications of atypical structures that don't fit in the previously mentioned sub writes [5]. This subclassification relies upon the seriousness and term of hyper (or hypomanic) and depressive scenes. Patients with bipolar scatters may have the capacity to accomplish full reduction and have symptom‐free periods, amid which the confusion is thought to be idle, with ideal administration [6,7,8]. Be that as it may, as a rule, residual and subthreshold side effects persevere in an inescapable way, making utilitarian recuperation hard to accomplish, particularly after the second, third and ensuing episodes [9,10]. Administration includes pharmacological and nonpharmacological medicines for intense stages in hyper (or hypomanic) and depressive scenes and long‐term treatment to avoid scene repeat [11].

PATIENTS AND METHODS:

This research included to understand and find accurate drug against bipolar disorder. The procedure included random method. In this method patient were divided into three groups. And the drugs were taken from two separate groups i.e. mood stabilizers and antipsychotics [12]. The data recording was done after regular treatment of the patient. After conducting experiments, the results were compared to evaluate the relative impression of treatments. The data recording duration was between 2017 and 2018. Tools from bioinformatics were used to accurately measure the resistance [13]. General classification was done among patients, regardless the type of BD. The collected data was analyzed using three different digital models. The efficacy of drug type was done to compare the efficacy of the tools.

The approved agents by USFDA and regularly used for BD were collected. Three distinct groups of patients included category 1 i.e. patients given mood stabilizers, category 2 i.e. patients treated with antipsychotics and category 3 i.e. control/ non-treated. Sample collection was done from all three categories [14]. The Performa filling technique was also adopted to check response of the patients. The sampling duration included of 1 week, 2 week and 3 weeks from different host patients. The DNA sampling was also done to check the allelic response in patient's gene. The DNA samples were stored at 20oC in an incubation chamber. The results were evaluated based on swiss model. The model is used for both comparative modeling and homology method. This model help modeling the results in different dimensions [15,16].

Gene association and locus points of respondents were checked during treatment. The Gene *PTGFR* located on 1p31.1, *ADCY2* located on 5p15.31 loci, *MAD1L1* located on 7p22.3, *ELAVL2* located on 9p21.3 loci, *ADD3* located on 10q25.1 loci, *DGKH* located on 13q14.11 loci, *ERBB2* located on 17q12, *TRPC4AP* located on 20q11.2 loci and *NCAN* located on 19p13.11 loci were not reproduced during BD treatments. The gene *LMAN2L* with loci 2q11.1, *TRANK1* with loci 3p22.2, *MIR2113* with loci 6q16.1, *SYNE1* with loci 6125.2 and *ANK3* with loci 10q21.2 loci expressed the reproducing ability during treatment. Six drugs were investigated according to their properties and uses. Among these, two most effective were used to treat the patients. The drugs, their properties and adverse effects has been tabulated bellow [17,18,19].

Sr. No.	Drug	Mania/mixed features	Depression	Qualities	Adverse effects
Mood stabilizers					
1	Lithium	Yes	No	Has anti-suicidal properties	Reduced renal function
2	Carbamazepine (extended-release)	Yes	No	Useful for treatment of patients with non-classic features	CYP450 inducer
3	Lamotrigine	No	No	Depressive predominant polarity; requires slow titration	Steven Johnson syndrome
Antipsychotics					
4	Aripiprazole	Yes	No	Manic predominant polarity; good metabolic profile	Akathisia (restlessness and an inability to remain still)
5	Asenapine	Yes	No	Possibly effective for depressive symptoms	Moderate metabolic syndrome
6	Cariprazine	Yes	No	Good metabolic profile	Akathisia

RESULTS:

Total 60 patients were kept under observation and keen clinical treatments. Category 1 of the patients was treated with *Lithium* (mood stabilizer) which had a fixed feature, no depression and is a maintained agent. It also had anti suicidal characteristic. The category 2 was treated with *Aripiprazole* (an antipsychotic with a fixed feature and no depression). It has the ability of manic predominant polarity and good metabolic profile. The age limit ranged between 18 to 45 years. The mean age was calculated as 31.5 years. There was no discrimination of the individual's selected and was made totally on random bases. But the baseline character i.e. age category and BD level were the key behind selection. The treatment was made on clinical and experimental bases. The treatment modeling was performed a day of starting experiment and were regularly done during treatment on daily bases. The purpose was to check the daily response of patient to the drug given [20]. Pre-modeling tests have been shown in Table 1. Post modeling BD acuity was statistically significant ($p < 0.05$). From category 1, fifteen individuals resulted improved BD acuity. The BD acuity number for second group was quite low i.e. 3. After treatment, 70% individuals from category 1 occasioned improved resistance against BD. Whereas category two shown only 15% improvement.

Table I: Baseline BD acuity in all patients (n=60)

BD efficacy in control group	Category 1 (n=30)	Category 2 (n=30)
20%	0	0
30%	0	0
40%	0	0
50%	0	1
60%	10	11
70%	16	10
80%	4	7
90%	0	1
100%	0	0
Total	30	30

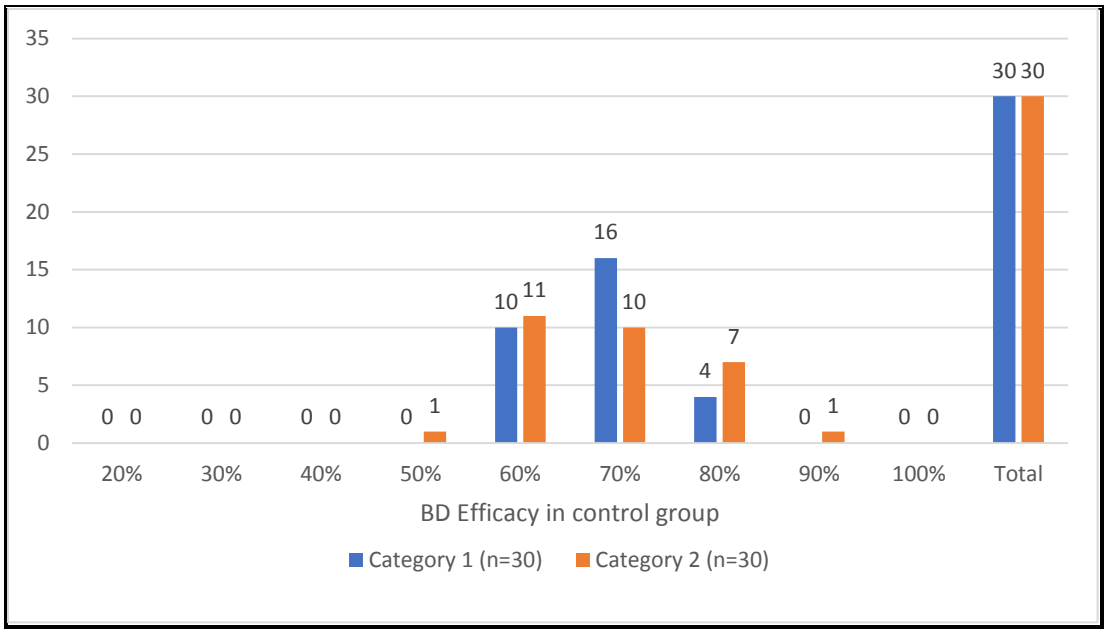
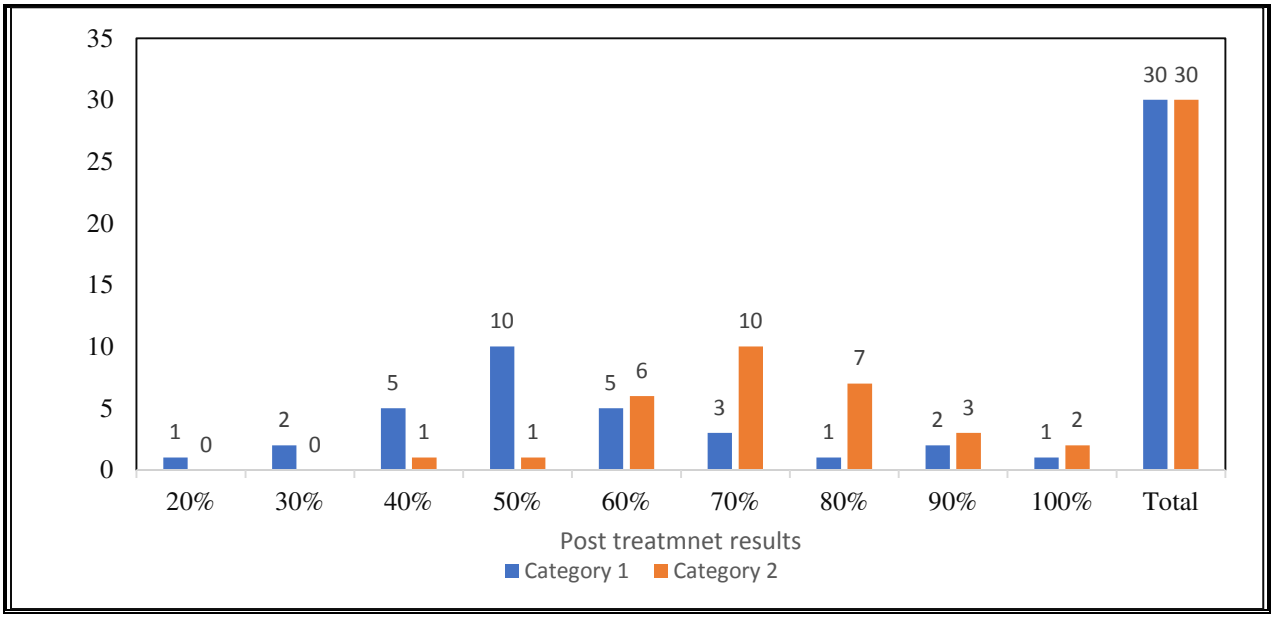


Table II: Post treatment outcome **in category 1 (*Lithium*) and category 2 (*Aripiprazole*) n=60**

Post treatment results	Category 1	Category 2	Total
20%	1	0	1
30%	2	0	2
40%	5	1	6
50%	10	1	11
60%	5	6	11
70%	3	10	13
80%	1	7	8
90%	2	3	5
100%	1	2	3
Total	30	30	60



DISCUSSION:

The curative behavior of the patients is base of immunity against any disease/problem. The patient when treated with Lithium results in anti-suicidal effect [19,20]. That reduces the level of BD [21]. While the treatment with Aripiprazole generates good metabolic profile [22]. But the risk is also there in both treatments [17]. But the risk level is comparatively low in treatments with Lithium than Aripiprazole. The only benefit of treatment with lithium which differentiates it from other, is early curative behavior of the patients [19]. Some scientists conclude that this effect may be temporary or permanent [20,21]. But the results of present study indicate a better condition to BD after regular treatment for a month. These results were better for category 1 than category 2. Hence treatment with suitable drug in individuals can produce featured results [17,22]. The results also indicate that the anti-sucidal behavior of the patient was changed after few weeks. This indicates the efficacy of applied drug and clinical measures [10]. This applied work provides dimensions to regulate the treatments against BD.

CONCLUSION:

The bipolar disorders have been faced worldwide. The limitations still exist to study and explore the phenomena properly. The synergetic impact of biological and bioinformatic tools along with molecular research can play role in establishing accurate protective measures. This study enables us to corelate different techniques to measure and eradicate bipolar disorders.

REFERENCES:

[1] Cullen, B. et al. Prevalence and correlates of cognitive impairment in euthymic adults with bipolar disorder: A systematic review. J. Affect. Disord. **205**, 165–181 (2016).

[2] Goodwin, F. & Jamison, K. Manic-Depressive Illness: Bipolar Disorders and Recurrent Depression. (Oxford Univ. Press, 2007).

[3] American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, DSM-5. (American Psychiatric Publishing, 2013).

[4] World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research (DCR-10). (WHO, 1993).

[5] Merikangas, K. R. et al. Prevalence and correlates of bipolar spectrum disorder in the world mental health survey initiative. Arch. Gen. Psychiatry **68**, 241–251 (2011).

[6] Blanco, C. et al. Epidemiology of DSM-5 bipolar I disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions — III. J. Psychiatr. Res. **84**, 310–317 (2017).

[7] Nivoli, A. M. A. et al. Gender differences in a cohort study of 604 bipolar patients: the role of predominant polarity. J. Affect. Disord. **133**, 443–449 (2011).

[8] Dagani, J. et al. Meta-analysis of the interval between the onset and management of bipolar disorder. Can. J. Psychiatry **62**, 247–258 (2017).

[9] Altamura, A. C. et al. Duration of untreated illness and suicide in bipolar disorder: a naturalistic study. Eur. Arch. Psychiatry Clin. Neurosci. **260**, 385–391 (2010).

[10] Vigo, D., Thornicroft, G. & Atun, R. Estimating the true global burden of mental illness. Lancet Psychiatry **3**, 171–178 (2016).

[11] Oldis, M. et al. Trajectory and predictors of quality of life in first episode psychotic mania. J. Affect. Disord. **195**, 148–155 (2016).

[12] Perlick, D. A., Rosenheck, R. R., Clarkin, J. F., Raue, P. & Sirey, J. Impact of family burden and patient symptom status on clinical outcome in bipolar affective disorder. J. Nerv. Ment. Dis. **189**, 31–37 (2001).

[13] Gardner, H. H. et al. The economic impact of bipolar disorder in an employed population from an employer perspective. J. Clin. Psychiatry **67**, 1209–1218 (2006).

[14] Macneil, C. A. et al. Psychological needs of adolescents in the early phase of bipolar disorder: implications for early intervention. Early Interv. Psychiatry **5**, 100–107 (2011).

[15] Merikangas, K. R. et al. Lifetime and 12-month prevalence of bipolar spectrum disorder in the National Comorbidity Survey replication. Arch. Gen. Psychiatry **64**, 543–552 (2007)

[16] Williams, L. J. et al. Bipolar disorder and adiposity: a study using whole body dual energy X-ray absorptiometry scans. Acta Neuropsychiatr. **23**, 219–223 (2011).

[17] Bortolato, B., Berk, M., Maes, M., McIntyre, R. S. & Carvalho, A. F. Fibromyalgia and bipolar disorder: emerging epidemiological associations and shared pathophysiology. Curr. Mol. Med. **16**, 119–136 (2016).

[18] Correll, C. U. et al. Prevalence, incidence and mortality from cardiovascular disease in patients with pooled and specific severe mental illness: a large-scale meta-analysis of 3,211,768 patients and 113,383,368 controls. World Psychiatry **16**, 163–180 (2017).

[19] Vancampfort, D. et al. Diabetes mellitus in people with schizophrenia, bipolar disorder and major depressive disorder: a systematic review

and large scale meta-analysis. World Psychiatry **15**, 166–174 (2016).

[20] Roshanaei-Moghaddam, B. & Katon, W. Premature mortality from general medical illnesses among persons with bipolar disorder: a review. Psychiatr. Serv. **60**, 147–156 (2009).

[21] McElroy, S. L. et al. Obesity, but not metabolic syndrome, negatively affects outcome in bipolar disorder. Acta Psychiatr. Scand. **133**, 144–153 (2016).

[22] Dols, A. et al. The prevalence of late-life mania: a review. Bipolar Disord. **16**, 113–118 (2014).23. Gonda, X. et al. Suicidal behaviour in bipolar disorder: epidemiology, characteristics and major risk factors.J. Affect. Disord. **143**, 16–26 (2012).