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MANGEMENT OF BIPOLAR DISORDER (BD) TROUGH MEDICATION AT PUBLIC SECTOR HOSPITAL IN LAHORE.

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Abstract
Bipolar disorder is a mental illness where changes in brain functions transform normal emotions/sentiments to dramatic mood swing between mania and depression. Severity in mood swing may lead to impair normal functioning at work, at school and in relationships etc. The common interventions for management for bipolar disorder include medication, psychotherapy and electroconvulsive therapy (ECT) as per need of patient. This observational study was carried out on 40 patients diagnosed with bipolar disorder at Punjab Institute of Mental Health (PIMH), Lahore. The main aims included, evaluation of the rationality of prescribing/use of medicines and patient – health care provider's interaction. The results indicated that three mood stabilizers, namely, Sodium Valproate (55% patients), Carbamazepine (27.50%patients), Lithium (5% patients) and combination of two mood stabilizer (5% patients) were prescribed /used. The combination of the antipsychotic, mood stabilizer and benzodiazepines was the main treatment regimen of bipolar disorder (85% Patients) in PIMH. Non-compliance/adherence was the vital issue in about 62.5% patient. 67.5% relapse was a big issue in BD at PIMH. The effective patient – health care provider's interaction was practically non-existent. Neither pharmaceutical care practiced nor the pharmacists were involved in drug use process. PIMH, Lahore is a blessing for poor people of Pakistan, but authorities need to rationalize management of BD for best interest of patient as well as society.
Key words*:* Bipolar disorder, mania, depression, management

Introduction

Bipolar disorder (BD) or bipolar affective disorder previously known as manic-depressive disorder is a mental illness. It is a category of mood disorders characterized by the presence of one or more episodes of abnormally elevated energy levels, cognition and elevated mood clinically referred as mania with or without depression. Some patients may experience depression and mania simultaneously in mixed episodes. The tem BD was first proposed by German psychiatrist Karl Leonhard in 1957.He had introduced the terms bipolar for mania and unipolar for depressive episodes [1, 2, 3]

The two poles of BD are lows of depression to the highs of mania. Some symptoms of depression include sadness, refusing to get out of bed for days, sleeping much more than usual, being tired all the time but unable to sleep, having bouts of uncontrollable crying, becoming least interested in things once enjoyed, escape from day to day responsibilities, hopelessness, feeling helpless or worthless for a sustained period of time and inability to make simple decisions and desire to die. The symptoms of mania include euphoria, feeling that one can do anything despite being unsafe or illegal, needing very little sleep, yet never feeling tired, dressing flamboyantly, spending extravagantly, recklessness, increased sexual desires to the level of criminality, hallucinations or delusions and feeling filled with energy. The patient alternates between states of deep depression and extreme elation. The normal emotions can become a roller coaster ride of wild highs and devastating lows. Mania is the most dramatic expression of Bipolar Disorder and may overshadow the impact of the depressive phase of the illness. However, episodes of depression are more frequent, of longer duration as compared with mania, and are associated with higher rates of morbidity and mortality. Therefore, successful treatment and prevention of bipolar

depression remains an essential treatment goal. Common signs of a mixed episode include depression combined with agitation, irritability, anxiety, insomnia, distractibility, and racing thoughts. This combination of high energy and low mood makes for a particularly high risk of suicide [1,4,5,6,7] Based upon the nature and severity of mood episodes experienced, the disorder has been subdivided into Bipolar I, Bipolar II, Rapid-Cycling BD, Mixed State Bipolar Disorder, and Cyclothymia [1].

The causes of BD aren't completely understood, Genetic studies have suggested many genes appearing to relate to the development of BD. However, evidence suggests that environmental factors play a significant role in the development and course of BD, and individuals with psychosocial variables may interact with genetic dispositions [8,9].Physiological abnormalities in the structure and/or function of certain brain circuits could underlie bipolar. A general reduction of brain volume and anatomically specific differences in areas such as the prefrontal cortex and the globus pallidus are most commonly found [10].

There is fairly consistent evidence from prospective studies that recent life events and interpersonal relationships contribute to the likelihood of onsets and recurrences of bipolar mood episodes [11] (Alloy et al., 2005).

There is no laboratory test or x-ray that can be used to make a definitive diagnosis. Instead, a psychiatrist takes a careful history and bases diagnosis on a group of symptoms that occur together. The best assessment could be made by adopting criteria formulated by American Psychiatric Association and ICD-10-WHO. Recent brain scan research is making progress in understanding differences in brain functioning that may accompany BD. Bipolar spectrum diagnostic scale is utilized for evaluation [1,12,13]

Many films like Mr. Jones 1993, The Mosquito Coast 1986 and Allie have portrayed characters with traits depictive of BD. The swings between manic episode and a depressive phase, spending time in a psychiatric hospital and features such as recklessness, grandiosity, increased goal-directed activity and mood lability, as well as some paranoia showing many of the features of the BD.

The link between bipolar disorders and creativity has been studied. There was evidence that many notable people with creative talents had suffered from some kind of BD [14]

Effective management and treatment for BD is a combination of many things, including education about the disorder to help understanding and self-management, substance abuse treatment, medication, electroconvulsive therapy, psychotherapy, peer and self-help groups, and support from family and friends. The medications include mood stabilizers: such as Lithium anticonvulsants recognized as mood stabilizers, valproic acid, divalproic sodium, carbamazepine, lamotrigine, gabapentin and topiramate. Antipsychotic medications are combined with mood stabilizers in order to control psychotic symptoms. Some commonly used anti-psychotics are olanzapine, risperidone, ziprasidone and quetiapine. Anti-depressants are often used together with a mood stabilizing medication. Common ones are fluoxetine, paroxetine, sertraline, citalopram, venlafaxine and bupropion. Anti-anxiety medication benzodiazepine, lorazepam and clonazepam are used for short periods of time in hypo-manic and manic episodes in order to calm the patient. Anti-anxiety medication may cause addiction spectrum treatment in refractory cases [15, 16, 17, 18]. When the symptoms

of broad mania have gone, long-term treatment then focuses on prophylactic treatment to try to stabilize the patient's mood, typically through a combination of pharmacotherapy and psychotherapy [19, 20].

Around 40% of patients diagnosed with BD do not adhere to prescribed medication Non-adherence/ noncompliance is associated with higher rates of relapse ,hospital admission and suicide .Concerns about medication related side effect have also been associated with nonadherence [21,22,23,24].

The observational study was carried out at PIMH, Lahore with main objectives of evaluation of the rationality of prescribing/use of medicines and patient – health care provider's interaction.

Material and Methods

This observational study was carried out from 7th June to 8th August 2009, at PIMH, Lahore. This is a 1400 bed institution dealing with mental health was established in 1900 and is among 5 biggest institutions in Asia.

40 ambulatory patients were included in the study. The inclusion criteria was that patient was diagnosed with BD by the health care providers at PIMH, Lahore. Males and females without any age restriction were included in the study.

A data collection form was designed for collecting informations of patient diagnosed with BD. The information included bio data, gender, medication history, family history of disease, social history, patient - health care provider's interaction, counseling, and relapse. Noncompliance/nonadherence is a vital issue for any drug therapy for BD. The participants were asked through a semi-structured interview about their nonadherence to medication, including stopping the medication, changing the dose of medication and forgetting to take medication.

Results and Discussion

The data collected was analyzed and the result obtained had shown that the sample population of BD comprised of 55% males and:45% females, most patients belonged to the age group of 21-30 years (37.5%) , 62.50% patients were married, 42.50% illiterate whereas 40% primary-matric and 17.50% secondary level-graduate, 42.5% lower class whereas 40% middle class and17.5% high class (17.5%), 35% of the subjects had a family history of disease, 75% had comorbidity without administration of any drugs while 25% of the population had comorbidity with administration of drugs, relapse reported in 67.5% with the highest frequency of 3-5 times (25.90%), reason of relapse included stress (48.10%) , seasonal (22.20%) and non-compliance (29.62%) Mood stabilizers being used included sodium valproate (55%), lithium (5%), carbamazepine (27.50%) or a combination of the mood stabilizers (5%). The classes of antipsychotics being used were typical (35%), atypical (27.50%) or a combination of both (22.50%). The mood stabilizer combined with antipsychotic was most popular treatment regimen (85%). Another treatment regimen included combination of antipsychotic, mood stabilizer and a benzodiazepine (12.50%). 2.50% of the subjects were solely being treated on mood stabilizer. 62.50% patients had poor compliance/adherence. Only 10% patients or there attendants were counseled regarding use of medicine. The effective patient – health care provider's interaction was practically non-existent. Nobody knew the concept of pharmaceutical care. The results were represented graphically as shown in figures 1-13.

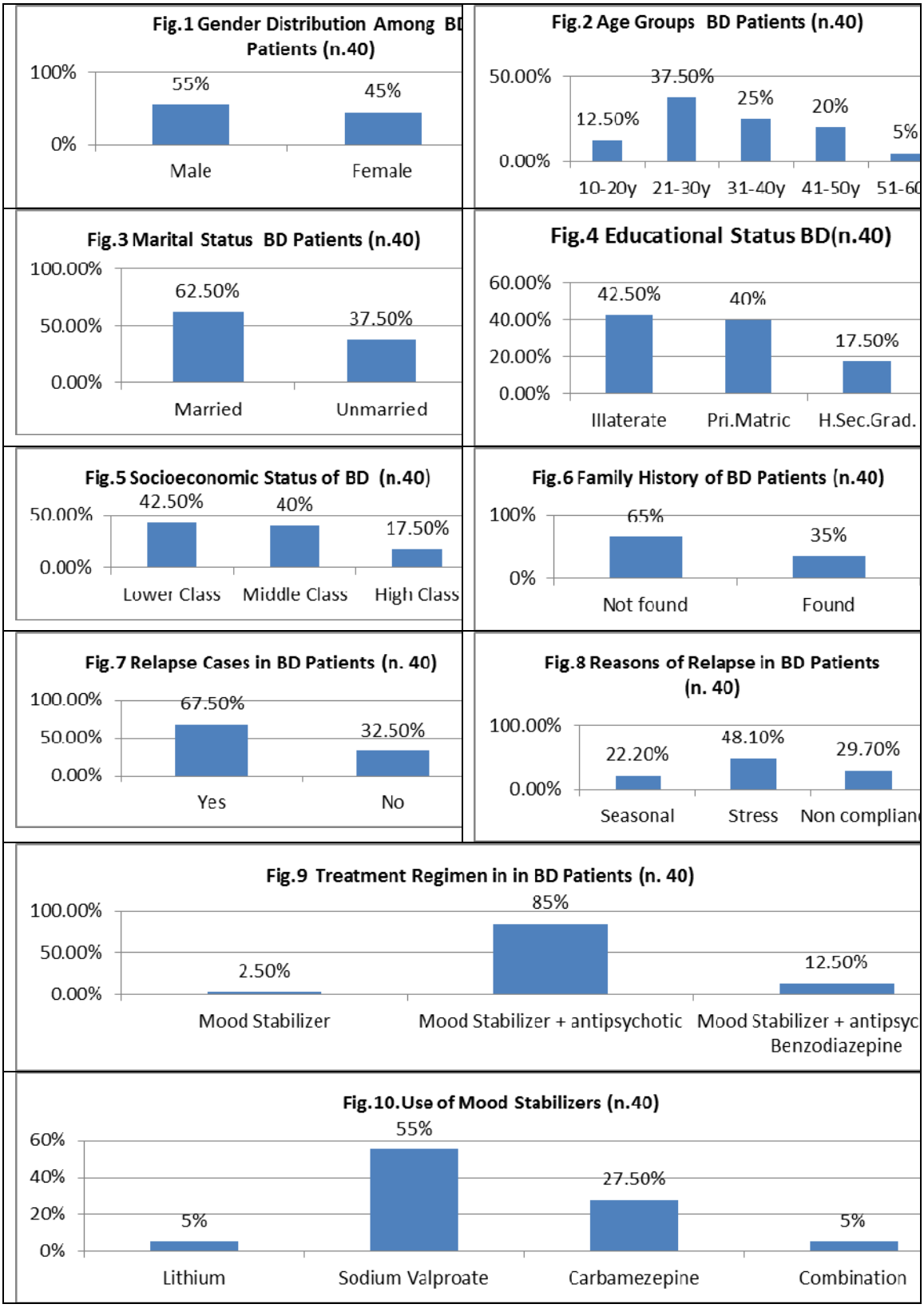
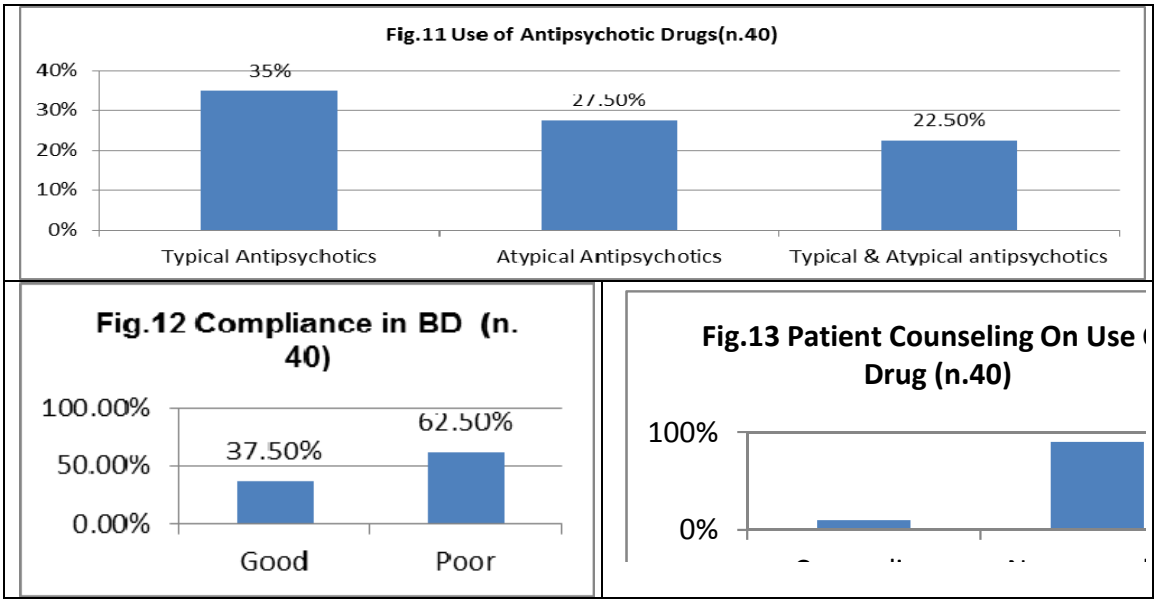


Fig.1 Gender Distribution Among BD Patients (n.40)
100%
0%
55%
45%
Male
Female
Fig.2 Age Groups BD Patients (n.40)
50.00%
0.00%
12.50%
37.50%
25%
20%
5%
10-20y
21-30y
31-40y
41-50y
51-60
Fig.3 Marital Status BD Patients (n.40)
100.00%
50.00%
0.00%
62.50%
37.50%
Married
Unmarried
Fig.4 Educational Status BD(n.40)
60.00%
40.00%
20.00%
0.00%
42.50%
40%
17.50%
Illaterate
Pri.Matric
H.Sec.Grad.
Fig.5 Socioeconomic Status of BD (n.40)
50.00%
0.00%
42.50%
40%
17.50%
Lower Class
Middle Class
High Class
Fig.6 Family History of BD Patients (n.40)
100%
0%
65%
35%
Not found
Found
Fig.7 Relapse Cases in BD Patients (n. 40)
100.00%
50.00%
0.00%
67.50%
32.50%
Yes
No
Fig.8 Reasons of Relapse in BD Patients (n. 40)
100.00%
0.00%
22.20%
48.10%
29.70%
Seasonal
Stress
Non complian
Fig.9 Treatment Regimen in in BD Patients (n. 40)
100.00%
50.00%
0.00%
2.50%
85%
12.50%
Mood Stabilizer
Mood Stabilizer + antipsychotic
Mood Stabilizer + antipsyc
Benzodiazepine
Fig.10.Use of Mood Stabilizers (n.40)
60%
40%
20%
0%
5%
55%
27.50%
5%
Lithium
Sodium Valproate
Carbamezepine
Combination



The issues and problem related to BD patients are almost same everywhere but patient care related interventions differ qualitatively as well as quantitatively. Punjab Institute of Mental Health (PIMH), Lahore is a blessing for the patients in Pakistan who suffer from various mental illnesses including BD because it provide free 100% medicines and ECT to all OPD/Ambulatory patient. Indoor patients are also served with free food during hospitalization.

The management for bipolar disorder at PIMH, Lahore included medication, psychotherapy and electroconvulsive therapy (ECT) as per need /type of BD patient. Three mood stabilizers Sodium Valproate (55% patients) , Carbamazepine (27.50% patients) , Lithium (5% patients).These mood stabilizers were combined with antipsychotic, and benzodiazepines in 85% patients in PIMH. The non-compliance (62.50%) and relapse in (67.5%) are big issue in managing BD at PIMH, Lahore. Intramuscular injection of antipsychotic and/or benzodiazepine was used in emergency situation.

Lithium, with added benefit of antisucidal activity, remains the only medication that was approved first for bipolar disorder, rather than being developed for other conditions or symptoms and later found to work as a mood stabilizer. It was approved by FDA in 1970. Lithium is a low price medicine as compared to other mood stabilizers but it was used at PIMH in only those patients who were resistant to other mood stabilizers.

BD is the 5th leading cause of disability. It can cause suicidal ideation that leads to suicidal attempts. One out of 3 people with BD report past attempts of suicide or complete it [25]. It was interesting observation that there was nothing on record at PIMH regarding suicidal attempts by BD patient.

The pharmacists were not involved in drug use process in BD because only two pharmacists are working in this 1400 bed hospital dealing with mental health since 1900 and is among 5 biggest institutions in Asia. It is strange as well as against Punjab's Government policy of one pharmacist per 50 beds.

A pharmacist working in a chemical-dependency rehabilitation program has a unique opportunity to affect positively the physical and emotional health of the

recovering individual by taking on responsibilities beyond those traditionally associated with pharmacy practice [26]. The practice pharmaceutical care has revolutionized the individualized patient care all over the globe as patient is made partner for his own care and health care provider are accountable for the service provided .It is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life. These outcomes are: cure of a disease, elimination or reduction of a patient's symptomatology, arresting or slowing of a disease process, or preventing a disease or symptomatology [27]. The collaborative practice model in BD has revealed that such practice facilitates adherence/compliance [28].The implementation of pharmaceutical care in management of BD will definitely improve patient care in Pakistan as it Identifies, resolve, prevent and monitor the patient's drug-related problems such as untreated indication subtherapeutic dosage, compliance, overdosage, ADRS, medicine related morbidity and mortality, drug interactions drug-use without indication.

Conclusion and Recommendations

BD is a long-term illness affecting personal health, relationships, social and spiritual issues. It may require long-term support due to periodic relapses. The main goal of any management should be focused on maximizing functioning and well-being and minimizing disability. All interventions related to assessments, treatment and monitoring in BD must be done as continuous ongoing phenomenon and include the patient and his family member. The following are the recommendations for better patient care BD patient in Pakistan

[1] PIMH .Lahore being biggest and ancient institution of mental health in Pakistan should develop Clinical Practice Guidelines for the Diagnosis, Treatment and Management of Bipolar Disorder. The Pharmaceutical Care, follow up and Therapeutic Drug Monitoring (TDM) should be put in these guidelines as an integral component.

[2] Access to health care provider and facility must be without any discrimination and stigma. Mobile Psychiatric Unit will be of great benefit.GP in community must be trained for early management of BD

[3] The effective patient – health care provider's interaction including counseling and education must be designed and implemented as continuous ongoing phenomenon .The family member, friend or care giver of BD patient should learn the particular warning signs for how that person acts when he or she is getting manic or depressed or under suicidal idealization, in order to safeguard patient as well as society. Patient attendant must be empathetic not sympathetic.

[4] All concerned must be vigilant to ensure adherence/compliance to patient medications.

[5] Emergency department at PIMH, Lahore must be upgraded, strengthened and modernized.

[6] Public awareness should be created that hospitalization can be life-saving in suicidal depression and uncontrollable manic episodes which can be dangerous to the patient, family as well as to the society.

[7] A patient recovering from an episode must be allowed to approach life at his without over-expecting and overprotecting for bringing back their self-confidence.He should be helped to develop a lifestyle that supports his overall wellness.

[8] Triggers for mood swings such as alcohol or drug abuse, non-compliance, thyroid problems, changing the seasons, problems at work, death of a loved one, and marital status must be taken in account for taking patient history and any management plan for BD.

[9] Lithium should be the first choice in the treatment of bipolar depression in patient with suicidal ideation. TDM should be done for all patients at PIMH.

[10] The number of pharmacist must be increased at PIMH, Lahore as per Government Policy. Clinical Pharmacist must be associated in all medications related managements of BD.

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