FACTORS AFFECTING THE CHOICE OF TREATMENT IN LIAISON PSYCHIATRY. A CENTRE-BASED STUDY

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ABSTRACT

Objective: To determine the effect of age, gender, socioeconomic status and comorbid conditions on the choice of treatment in liaison psychiatry.

Methods: This is a cross-sectional study in which data were collected from the cases referred to the department of Psychiatry and behavioural sciences for liaison-consultation. To use the data in the research, permission was sought from the Medical Director of the Hayatabad Medical Complex. Ethical Approval was obtained from the ethical committee of Hayatabad Medical Complex. Data of 202 cases referred between 1st June 2017 till 31st may 2018 was included in the study. Data was collected on a semi-structured proforma. Incomplete records were excluded from the study. SSPS 20 was used for data analysis. Quantitative variables were analyzed by calculating the mean with the standard deviation. Qualitative variable analysis was done by the chi-square test.

Results: In this study mean age of patients was 26.27 years with a standard deviation of 10.56. 48.5% of patients were male, while 51.5% of patients were female. Major depressive disorder was the most common psychiatric disorder in the referred patients. Hypertension and its complications were the most common physical comorbidity. Sertraline was the most commonly used antidepressant while olanzapine was a commonly used antipsychotic.

Conclusion: This study shows that physical comorbidity was the most important factor effecting choice of treatment in liaison psychiatry.

Keywords: Consultation-Liaison psychiatry, Depression, Bipolar affective disorder, Psychosis, selective serotonin reuptake inhibitors, socioeconomic status, comorbidity.

INTRODUCTION

Psychiatric comorbidity in physical disorders is common, and physical disorders such as Cushing syndrome, Addison disease, thyroid disease, and hepatitis are strongly associated with psychiatric comorbidity[1]. Psychiatric disorders increase the morbidity and mortality associated with physical disorders[1,2]. Psychiatric comorbidity contributes to more than 10% of lost years of healthy life and over 30% of all years lived with disability. This places an enormous burden on society and causes huge economic loss. Depression is ranked as the fourth leading cause of burden among all diseases, accounting for over 50 million lost years of healthy life worldwide[2]

Psychiatric comorbidity of physical disorders results from combination of factors including the effect of stress associated with physical illness, use of illicit drugs to relieve pain and distress, harmful effects of prescribed medication and failure to seek medical help on time. Liaison psychiatry plays an important role in managing psychiatric comorbidity in patients admitted in hospitals for various physical disorders[3,4].

Liaison psychiatry is a sub-specialty of psychiatry in which psychiatric service is offered to patients admitted in different units of a general hospital. A liaison psychiatry team usually consists of a psychiatrist, a psychologist, a psychiatric nurse and a social worker. Sometimes it also includes other mental health professionals such as child psychiatrists. They provide input to patients in two ways, in consultation form and in liaison form. In consultation, patients are assessed by members of the liaison psychiatrist at the request of the physician or surgeon caring for them. In liaison, members of the liaison psychiatry team assume a broader role and become integrated into the team of their general hospital colleagues [5,6].

Liaison psychiatry team uses different tools to treat psychiatric comorbidity. In majority of

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patients' pharmacological approach is used to manage them. Medication use in liaison consultation can be different from that of treatment given in psychiatric out patient department. Choice of treatment given can be effected by factors such as physical comorbidity, age, gender and drug-to-drug interaction etc[7,8]. Even among the same class of medication there is wide variety of psychiatric medication available. Research suggests that most of the antidepressants and antipsychotics are equal in efficacy but differ in side effect profile. Therefore, American Psychiatric Association guidelines recommends that choice of treatment should be made on the basis of side effect tolerability, patient preference and medication cost[7,8,9,10,11].

The purpose of this study is to determine the effect of age, gender, socioeconomic status and comorbid conditions on the choice of treatment in liaison psychiatry.

MATERIALS AND METHODS

This is a descriptive cross-sectional study in which data was collected from the cases referred to the department of Psychiatry and behavioral sciences for liaison-consultation Patients were included through convenient sampling technique. Cases managed by Psychiatry team consisting of a psychiatrist, clinical psychologist and support staff. To use the data research purpose, permission was sought from Medical director of the Hayatabad Medical Complex. Ethical Approval was obtained from ethical committee of Hayatabad Medical Complex. All the cases referred to Psychiatry department from 1st June 2017 till 31st may 2018 were included in this study. However, those patients who refused to give informed consent were excluded from the study. Data was collected on a semi structured proforma. Psychiatric diagnosis was made using DSM-V criteria.

Mean + standard deviation was used for the calculation of quantitative variable like age. Frequencies and percentages were calculated for qualitative variables like gender, psychiatric disorder, co-morbid physical illness and treatment given. Data was analyzed using SSPS 20. Chi square test was used as a test of significance.

RESULTS

In this study mean age of patients was 26.27 ± 10.56 years. 48.5 % of patients were male while 51.5% of patients were females.

Major depressive disorder was the most common disorder (n=137, 67.8%) in the referred patients. Psychotic features were present in (n=16,7.9%) of cases. Other psychiatric diagnosis included obsessive compulsive disorder (n=36, 17.82%) and Bipolar Affective disorder (n=13 ,6.4%).

Hypertension and its complications (n=99, 49%) were the most common physical comorbidity. Other referred cases included liver disease (n=44, 21,7%), diabetes mellitus (n=37,18.3%) and renal disease (n=12,5.9%). 4.9% of referred patients were pregnant. Sertraline (n=141,69.8%) was the most common antidepressant used; Fluoxetine was used in (n=32,15.84 %) of cases. Olanzapine was the most commonly used antipsychotic (n=15,7.42%) while quetiapine was used in (n=14,6.9%) of cases.

Choice of treatment had a significant relationship with psychiatric diagnosis and co morbid physical condition. However, Age, and gender and socioeconomic condition indicated by monthly income had no significant relationship with the choice of treatment prescribed.

Table 1: Demographic parameters of the study participants (n=202)

Age	26.27 ± 10.56 years
Gender	
Male	98(48.5%)
Females	104(51.5%)
Area of Residence	
Rural	170 (84.2%)
Urban	32 (15.8%)
Monthly Income (Rupees)	
Income up to 20,000	106 (52.47)
Income 20000- 40,000	20 (9.9)
Income Above 40,000	76 (37.6%)

Psychiatric Diagnosis	
OCD	37 (17.82%)
schizophrenia	16 (7.9 %)
Depression	137(67.8%)
Bipolar Affective disorder	13 (6.4%)
Comorbid conditions	
Hypertension & Its complications	99(49%)
Liver disease	44(27.7%)
Pregnancy	10 (4.9 %)
Diabetes mellitus	37(18.3 %)
Renal disease	12 (5.9%)
Medication prescribed for psychiatric condition	
Sertraline	141 (69.8%)
Fluoxetine	32 (15.84%)
Olanzapine	15 (7.42%)
Quetiapine	14 (6.9%)

Table 2: Relationship between Physical disorders, psychiatric comorbidity and psychiatric treatment.

Physical comorbidity. Psychiatric Disorder	Psychiatric diagnosis	Medication Prescribed				P value
		Sertraline	Fluoxetine	Olanzapine	Quetiapine	
Hypertension (n=99)	OCD	9(4.45%)	1(0.49%)	0	0	<0.001
	Depressive Disorder	73(36.1%)	5(2.47%)	0	0	
	Schizophrenia	0	0	4(1.98%)	1(0.49%)	
	Bipolar Affective Disorder	0	0	2(0.99%)	4(1.98%)	
Liver Disease (n=44)	OCD	11(5.4%)	1(0.49%)	0	0	<0.001
	Depressive Disorder	24(11.8%)	5(2.47%)	0	0	
	Schizophrenia	0	0	1(0.49%)	0	
	Bipolar Affective Disorder	0	0	2(0.99%)	0	
Pregnancy (n=10)	OCD	2(0.99%)	1(0.49%)	0	0	0.05
	Depressive Disorder	4(1.98%)	0	0	0	
	Schizophrenia	0	0	2(0.99%)	0	
	Bipolar Affective Disorder	0	0	1(0.49%)	0	
Diabetes Mellitus (n=37)	OCD	3(1.48%)	7(3.46%)	0	0	<0.001
	Depressive Disorder	6(2.97%)	12(5.94%)	0	0	
	Schizophrenia	0	0	0	7(3.46%)	
	Bipolar Affective Disorder	0	0	0	2(0.99%)	
Renal disease (n=12)	OCD	1(0.49%)	0	0	0	0.004
	Depressive Disorder	8(3.96%)	0	0	0	
	Schizophrenia	0		1(0.49%)	0	
	Bipolar Affective Disorder	0	0	2(0.99%)	0	

DISCUSSION

In this study, major depressive disorder was the most common psychiatric diagnosis. 67% of referred cases suffered from depression. This is in contrast to other studies which show that depression was present only in 5 to 20 % of cases[13,14]. Selective serotonin reuptake inhibitors (SSRI) were the most commonly prescribed antidepressants to treat it. Sertraline was used in 67.9% of cases. Previous studies confirm that sertraline is the most commonly used antidepressant in Liaison Psychiatry[15].

Fluoxetine was used in 15.8% of cases. Hypertension and its complications 99(49%) were the most common physical comorbidity. Other physical disorders included liver disease 44 (21.7%), diabetes mellitus 37(18.3%), and renal disease 12(5.9%). 4.9% of referred patients were pregnant. Psychoeducation and counseling of the patient and family were done in all the cases.

This study did not show any significant relationship between the treatment given and the age, gender socioeconomic status of the patients. This finding is supported by previous studies7,8. This is because most of the selective serotonin reuptake inhibitors (SSRI) and atypical antipsychotics are safe to use across different age and gender groups[7.9].

In this study apart from psychiatric indications, physical comorbidity emerged as the most important factor in determining the choice of treatment. This finding is also supported by previous studies and recommended by Maudsley guidelines[15]. The majority of the patients referred to the liaison service suffered from hypertension and its complications. Sertraline was the most commonly prescribed antidepressant to treat depression in this group. The use of sertraline in these cases is supported by previously done research including Maudsley guidelines[15,16,17]. The main reason for this preference is that sertraline offers minimum drug-to-drug interaction and better side effect tolerability profile[12,16,171,18]. Although first-generation antidepressants including tricyclic antidepressants (TCA) and monoamine oxidase inhibitors (MAOI) are equal in efficacy to second-generation antidepressants, selective serotonin reuptake Inhibitors (SSRI) offer better side effect tolerability[16,17,18]. Side effects caused by first-generation antidepressants include weight gain, worsening of glycemic control, dryness of mouth, urinary hesitancy, constipation, cardiac arrhythmias and erectile dysfunction. Therefore, TCAs and MAOIs can worsen the prognosis in a hypertensive patient. Another advantage SSRIs have over TCAs is that they are safer in case of overdose[16,17,18,19]. Even patients using SSRIs experience side effects but they are better tolerated by the patient[19,20].

In this group, 5.4% of hypertensive patients suffered from Schizophrenia and Bipolar affective disorder. These cases were treated with olanzapine. Although some studies have discouraged the use of olanzapine due to metabolic side effects associated with olanzapine other studies have shown that many psychiatrists prefer olanzapine[21,22]. The main

reason for this preference is the effectiveness of olanzapine in treating both positive and negative symptoms of schizophrenia, its low cost, easy availability, and once-daily dosage[16,17,19,22]. However, it causes significant weight gain, dyslipidemia, and metabolic syndrome[21,22]. Therefore, olanzapine can increase the risk of stroke and can worsen the prognosis in this group[21]. To reduce the metabolic side effects associated with second-generation antipsychotics patients were advised to exercise regularly. Newer atypical antipsychotic quetiapine was preferred in these cases as it possessed a better metabolic profile[9,11,22].

In our Liaison Psychiatry service, Diabetes mellitus was present in 18.3% of referred cases. In this group, fluoxetine was the most commonly used antidepressant to treat depression. This finding is supported by the Maudsley guidelines which recommends fluoxetine due to its beneficial effect on carbohydrate metabolism[22,23]. Quetiapine was the most commonly used antipsychotic to treat psychosis in those with comorbid diabetes. This strategy is supported by some studies that suggest that a significant number of clinicians prefer quetiapine as its metabolic profile is better than olanzapine and risperidone[20,21,22]. It is also easily available and has a low propensity to cause extra-pyramidal symptoms[21,22]. However, the Maudsley guidelines recommend the use of newer atypical antipsychotics such as Aripiprazole, and ziprasidone because they have better metabolic profile[18]. Quetiapine, in the long run, will adversely affect the prognosis in these cases as it causes moderate weight gain and dyslipidemia and therefore should be avoided[21,22,23,24].

In this study, 4.9% of referred cases for the management of psychiatric comorbidity were pregnant. During pregnancy, women often try to avoid or discontinue antidepressants and are five times more likely to relapse as compared to women who continue their antidepressant treatment[25,26,27,28,29]. The majority of these women were prescribed sertraline which is considered safe in pregnancy and its use is consistent with recommended guidelines[15,21]. Although, some studies have warned against the use of SSRIs in the first trimester of pregnancy. They suggest an association between the development of fetal anomalies and the use of selective serotonin reuptake inhibitor (SSRI) especially during the first trimester of pregnancy. These anomalies include anal atresia, cystic kidneys, low birth weight, and lower Apgar scores[28,292,30,31]. However, other studies have disputed these

findings and linked these outcomes to untreated maternal depression[29,30,31]. Thus, it has been difficult to determine a causal relationship between fetal anomalies and antidepressant exposure during pregnancy[29,30,31,32]. Therefore SSRIs are considered the best options to treat depression during pregnancy. Psychosis in these cases was treated with olanzapine which is according to Maudsley guidelines[15,23].

In this study, 21.7 % of referred cases suffered from different liver diseases. In hepatic impairment, there is a reduced capacity of the liver to metabolize biological waste products including drugs[24,25,26]. This can lead to hepatic encephalopathy[25]. There is also a reduced ability to synthesize plasma proteins and vitamin K-dependent clotting factors[25,26]. As a result of hypoalbuminemia, highly protein-bound drugs can cause toxicity. There is also the risk of bleeding associated with certain SSRIs[6,17,18,19,20]. These cases were treated with sertraline and haloperidol in low doses which are associated with fewer side effects and recommended by guidelines[24,33,34].

In this study 5.9% of referred cases suffered from renal disease. Renal impairment can increase the risk of drug toxicity[27,29,20,31,32]. Maudsley recommends using medication that has a minimum effect on the glomerular filtration rate. In these cases, sertraline and olanzapine were used. Both these medicines in lower doses can be safely used in renal impairment and their use is supported by Maudsley guidelines[32,33,34,35,36,37,38,39].

Conclusions:

This study shows that apart from psychiatric indications, comorbid physical illness was the most important factor in determining the choice of treatment by the Liaison psychiatry team. Most of the medications prescribed were according to the recommended guidelines. However, in cases suffering from hypertension and diabetes, older atypical neuroleptics such as olanzapine and quetiapine were used instead of recommended Aripiprazole and ziprasidone because of the cost and their easy availability.

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