SHORT COMMUNICATION

Comparison of effectiveness between Haloperidol and Quetiapine in acute manic episode

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Abstract

This study was conducted to compare the response rate of Quetiapine and Haloperidol in patients with acute manic episodes. A total of 120 patients with acute episode of mania with baseline Young Mania Rating Scale (YMRS) of more than 20 were included and randomly allocated to either Quetiapine (Group A) or Haloperidol (Group B). Each patient was assessed at baseline. YMRS was administered at the start and at follow-up visit after six weeks. Comparison of response rate (>50% reduction in YMRS) was not statistically significant between the two groups (70% vs. 71.7%; p=0.410) after six weeks in acute manic episode. Quetiapine and Haloperidol emerged as equally effective pharmacological strategies for the treatment of bipolar mania. Quetiapine may be used as an alternative to conventional antipsychotics; Haloperidol can be used as replacement of Quetiapine as well, as it is of low cost.

Keywords: Acute manic episode; Quetiapine; Haloperidol

DOI: https://doi.org/10.47391/JPMA.3266

Introduction

Manic episode in patients with bipolar affective disorder (BPAD) is characterised by elevated or irritable mood, increased energy, lack of sleep and other relevant symptoms making a considerable impact on the quality of life of the individual.[1] The course of illness in these patients is usually chronic and recurrent, and associated with multiple other comorbid physical and psychiatric disorders.[2] It has a major effect on social and occupational aspects of the life of the affected individual.[3] Epidemiological statistics reveal that prevalence of this disorder is around 1% and both genders are affected equally.[4] Early onset and chronic course of bipolar affective disorder makes it a disease with very high disability. Patients suffering from this mental health condition may have manic or depressive episodes or mixed affective episodes.[5]

Manic phase of bipolar disease is an area of keen interest for clinicians and researchers and a lot of research has been done to look for best management option for acute phase and relapse prevention. Lithium has been the first line treatment option for both manic and depressive phases for long.[6] High efficacy of both the first and second generation antipsychotics in the management of BPAD has revolutionised the management and they have the same place in the management hierarchy as lithium. Among antipsychotics, it is very difficult to label any one option as the best for the management of BPAD. Although some studies show a few comparisons or differences between typical and atypical antipsychotics in mania,[7] many studies comparing Haloperidol with different atypical antipsychotics show a bit better response and much better tolerability than atypical antipsychotics, giving it an edge over typical antipsychotics.[8] There is a changing trend of treatment of bipolar affective disorder. In a retrospective review of medical records over a decade, it was observed that typical antipsychotics were largely replaced by second generation antipsychotics. In a meta-analysis conducted by Yildiz A. the response rate of Haloperidol was 65% and Quetiapine had a response rate of 42.6%.[9]

Keeping in mind that there have been no comparative efficacy trials between Quetiapine and Haloperidol in our country and also considering the importance of low cost of Haloperidol as compared to Quetiapine for the low-income patients in Pakistan, a quasi-experimental study was conducted in which the comparative response between Haloperidol and Quetiapine in the treatment of acute manic episode was assessed. The aim was to examine which was the better of the two in our local set up.

Patients / Methods and Results

This quasi-experimental study was conducted at the Department of Psychiatry, Pakistan Institute of Medical Sciences Islamabad, from January 2019 to June 2019. Sample size was calculated by openEpi software using the formula with anticipated population proportion of Haloperidol as 65.0%[9] and anticipated population

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proportion of Quetiapine as 42.6%.[9] Consecutive sampling technique was used to collect the sample. Patients of both genders between 15 and 50 years of age were included. All the patients with acute episode of mania with baseline Young Mania Rating Scale of more than 20 were included. All patients with mild, moderate or severe disease, according to the ICD-10 guidelines, were included. Patients with any organic diseases, head trauma, epilepsy, mental retardation, and substance misuse were considered patients with 'other psychiatric psychotic disorders'. Patients with other psychiatric disorders and those refusing to participate in the study were excluded from the study sample.

The response was defined as >50% reduction in YMRS after six weeks of study. The scale has 11 items with a total score of 59, with higher scores indicating a greater severity of symptoms

Ethical approval was taken from the hospital's ethics committee before the start of the study. An informed consent was taken from the patients before inclusion in the study. Patients were taken from both the outdoor department and those admitted as inpatients. All the information was collected on a semi-structured proforma. Patients were randomly assigned to either Quetiapine (Group A) or Haloperidol (group B) based on lottery method. Quetiapine was given orally in dose of 400mg in two divided doses, while Haloperidol was given orally in dose of 10mg in two divided doses. Physical examination including pulse, blood pressure and waste hip ratio was performed at baseline. All the baseline investigations including blood complete picture, liver function tests, renal function tests, lipid profile, blood sugar fasting, and ECG were done.

Each patient was assessed at the baseline. YMRS was administered at the start and at follow-up visit at 6th week. The study outcome was measured as response of the interventions after six weeks of treatment. Contact numbers of the patient and their immediate care givers were recorded at the first visit to ensure timely follow-up.

Data was analysed using SPSS 21.0. Descriptive statistics were used to calculate the mean and standard deviations from continuous variables like age and YMRS score. Categorical variables which were collected from the patients include gender, marital status, level of family income, family history of psychiatric illness, level of education, occupational status, and response. Frequencies and percentages were calculated for categorical variables.

Table-1: Descriptive statistics according to groups.

Variables	Group A n=60		Group B n=60	
	Mean	Std. Deviation	Mean	Std. Deviation
Age (Years)	30.48	7.86	31.10	8.11
Baseline YMRC	37.90	7.13	37.27	6.12
YMRC at 6months	22.65	8.92	23.02	9.11

Table-2: Comparison of response rate between groups after sixweeks in acute manic episode.

Response Rate	Group A n=60	Group B n=60	P-Value
Yes [>50% reduction in YMRS]	42(70%)	43(71.7%)	0.41
No [<50% reduction in YMRS]	18(30%)	17(28.3%)	

YMRS: Young Mania Rating Scale.

Post stratification chi-square test was applied to compare the response between the two drugs. Treatment outcome as response was compared using chi-square test between the two study groups. P-value of $\leq$0.05 was considered significant. A total of 120 patients with acute episode of mania with baseline Young Mania Rating Scale of more than 20 were included and randomly allocated to either Quetiapine (Group A) or Haloperidol (Group B). The average age of the patients was 30.79 $\pm$ 7.96 years. There were 64 (53.3%) males and 56 (46.7%) females. Mean age and YMRC score at baseline and after six months for both the groups is reported in Table-1. Comparison of response rate (>50% reduction in YMRS) was not statistically significant between the groups (70% vs. 71.7%; p=0.410) after six weeks in acute manic episode as shown in Table-2.

Conclusion

In this study Quetiapine and Haloperidol emerged as equally effective pharmacological strategies for the treatment of bipolar mania. Quetiapine may be used as an alternative to conventional antipsychotics. Haloperidol can be used as the replacement of Quetiapine as well as it is low cost.

Disclaimer: None

Conflict of Interest: None

Funding Disclosure: None

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