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RESEARCH ARTICLE

QUALITY OF LIFE OF ADOLESCENT PATIENTS WITH REMITTED BIPOLAR AFFECTIVE DISORDER ON TREATMENT WITH CLOZAPINE VS MOOD STABILIZER: A COMPARATIVE STUDY

Kulandaisamy[1], Sinha V.K[2] and Senthil M[3]*

[1,3]Department of Psychiatric Social Work, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore-29
[2]Department of Psychiatry, Central Institute of Psychiatry, (CIP), Ranchi

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ABSTRACT

Bipolar disorder, is a mood disorder that involves extreme changes in affect, cognition, and behaviour. At the extreme level, bipolar disorder can be associated with psychotic symptoms and can require inpatient care due to marked disorganization, agitation, hostility and impulsivity in the affected individual, or due to suicidal ideation or neglect of self-care in the depressive phase. It affects males and females in equal numbers universally, and also has similar epidemiological rates across all socio-economic groups and cultures. The typical age of onset of bipolar disorder is late adolescence or early adulthood. This disorder leaves significant implications for the person's developmental trajectory and quality of life. The present study was conducted at the Child and Adolescent Psychiatric Unit of Central Institute of Psychiatry (CIP), Ranchi. The present study was a cross sectional hospital based study. The sample comprised of 50 Caregivers of persons with dementia. The present study included 40 adolescents, among which 20 were adolescents with bipolar affective disorder on treatment with clozapine and 20 matched adolescent patients with bipolar affective disorder on treatment with mood stabilizer. The adolescent with bipolar disorder were selected from the child Psychiatric Unit of Central Institute of Psychiatry, Ranchi by using purposive sampling. The following tools were used for the current study: Socio-demographic data sheet and WHOQOL–100 (WHO, 1998). The result showed that quality of life of remitted bipolar adolescent patients does not differ significantly between those treated with clozapine or mood stabilizers. However patients treated with clozapine showed better quality of life in single domain of WHOQOL scale. Thus this study concludes that clozapine may be a better alternative to mood stabilizers when medication related adverse drug effects are considered in adolescent patients with bipolar affective disorder.

INTRODUCTION

Bipolar affective disorder in adolescents is upheaval tasks for psychiatrist and sometimes despite optimal trial patients do not show responses, in those cases psychiatrists have to rethink on drugs being prescribed to the patients and add other drugs and somatic treatments which are not considered as first line treatment. Clozapine was developed primarily for the treatment of schizophrenia but it has been in use for dealing with psychosis in BPAD in special populations like adolescents. Today symptoms alleviation is not the only target for mental health professionals, but restoration of functionality, raising the quality of life and subjective well-being of the patients have also been given importance. Quality of life has been emerged as a major parameter to measure the status of patient and to examine the effectiveness of a treatment module. At present quality of life judges how effective a particular treatment is. Quality of life of an individual can be said to be optimal or satisfactory if he/she has subjective feeling of being contended to his/her life and his/her activities. Quality of life has been operating as a major yardstick to examine the mental health status as well as effectiveness of the treatment module. In adolescent onset BPAD, treatment often become a tricky job for mental health professionals and ensuring quality of life of these people becomes a daunting task for clinicians. Comparison of medications in terms of their ability to restore quality of life has become a matter of study in recent days. The quality of life has been studied by numerous researchers in past but most studies were done on adult population and adolescents were not considered for such kind of studies. And in India such studies are very much handful in number. Despite taking

various mood stabilizers and antipsychotics, patients with bipolar disorder have shown poor quality of life. Clozapine has been used as a mood stabilizer in various studies. But there are lack of comparative studies between clozapine and other mood stabilizers on the quality of life of the patients. The findings of this study would be helpful to identify social, physical functioning and quality of life in early onset of bipolar disorder and to plan effective interventions with patients.

MATERIALS AND METHODS

The present study was conducted at the Child and Adolescent Psychiatric Unit of Central Institute of Psychiatry (CIP), Ranchi. The present study was a cross sectional hospital based study. The sample comprised of 50 Caregivers of persons with dementia. The present study included 40 adolescents, among which 20 were adolescents with bipolar affective disorder on treatment with clozapine and 20 matched adolescent patients with bipolar affective disorder on treatment with mood stabilizer. The adolescent with bipolar disorder were selected from the child Psychiatric Unit of Central Institute of Psychiatry, Ranchi by using purposive sampling. The following tools were used for the current study: Socio-demographic data sheet and WHOQOL–100 (WHO, 1998).

RESULTS

Table 1 Comparison of socio-demographic profile of adolescents with bipolar affective disorder in remission with clozapine and mood stabilizers

Variables		clozapine Group n=20 (Mean/n± SD/ %)	Mood stabilizer group n=20 (Mean/n± SD/ %)	χ2/t	df	P
Age(in years)		16.05± .94	15.70±1.34	0.954	38	0.064
Education	Illiterate	1 (2.5%)	0(0%)	1.059	2	0.589
	Primary	8 (20%)	9 (22.5%)			
	Secondary & above	11(27.5%)	11(27.5%)			
Sex	Male	11(27.5%)	14(35%)	0.960	1	0.327
	Female	9(22.5%)	6(15%)			
Occupation	Employed	1(2.5%)	0(0%)	1.026	1	0.311
	Unemployed	19(47.5%)	20(50.0%)			
Socioeconomic status	Lower	15(37.5%)	14(35.0%)	0.617	1	0.432
	Middle/upper	5(12.5%)	6(15%)			
Marital status	Married	2(5%)	1(2.5%)	0.360	1	0.548
	Unmarried	18(45.0%)	19(47.5%)			
Habitat	Rural	18(45.0%)	15(37.5%)	1.55 8	1	0.212
	Urban	2(5%)	5(12.5%)			
Family type	Nuclear	14(35.0%)	15(37.5%)	0.125	1	0.723
	Joint	6(15%)	5(12.5%)			

p=not significant

Table (1) shows comparison of socio-demographic variables of adolescents with bipolar affective disorder treated with clozapine and mood stabilizers. There were no significant difference in socio-demographic variables i.e. age, sex, occupation, socio-economic status, marital status, habitat and family type between two groups.

Table (2) shows comparison of clinical variables of adolescents with bipolar affective disorder currently in remission on treatment with clozapine and mood stabilizers. There was no significant difference in clinical variables i.e. duration of illness, family history and duration of illness between clozapine and mood stabilizer group.

Table (5) shows comparison of scores of different domains of WHO Quality of Life in adolescents with bipolar affective disorder currently in remission with clozapine and mood stabilizers. There was significant difference in the domain of environment domain between clozapine and mood stabilizer group indicating that patients with clozapine faired better in the environment domain of WHO-QOL-100. However there were no significant different in other domains of WHO Quality of Life - 100 between clozapine and mood stabilizer group, although trend towards better QOL in clozapine group was observed in physical and spirituality domain.

DISCUSSION

The comparison of socio-demographic data of adolescent remitted BPAD patients treated with clozapine and mood stabilizers showed no statistically significant difference with respect to age, sex, occupation, socioeconomic status, marital status, habitat and family type between the two groups. This finding is consistent with the finding of previous study done by Lewinsohn *et al* (2002) where the authors mentioned that there had been no significant difference in sociodemographic parameters in remitted adolescent BPAD patients within group but when compared to normal controls they found marked impairment in social (67%), family (56%), and academic/school related (83%) functioning. In our study only remitted BPAD adolescent patients were taken, hence no significant difference was observed on sociodemographic variables.

This finding was consistent with previous studies (Lewinsohn *et al*., 2002). Similarly no significant difference was observed in variables like duration of illness and duration of treatment between clozapine group and mood stabilaizers. Although no difference was found in family history, the number of patients having family history of mood disorder has been 22 out of 40 patients. This observation was also consisted with various findings of previous studies e.g., Nurnberger and Gershon (1992). These authors indicated that in bipolar disorder genetic loading is an important issue.

Table 2 Comparison of clinical variables of adolescents with bipolar affective disorder in remission across clozapine and mood stabilisers group

Variables		Clozapine Group n=20 (Mean/n±SD/ %)	Mood stabilizer group n=20 (Mean/n±SD/ %)	t	df	P
Duration of illness (in years)		2.00±0.79	1.95±0.82	.195	38	0.846
Duration of treatment (in years)		1.50±.7609	1.30 ±0.47	1.00	38	0.324
Family history	Present	11(27.5%)	11(27.5%)	.000	1	1.00
	Absent	9(22.5%)	9(22.5%)			

P=not significant

Table 3 Comparison of scores on different domains of WHO Quality of Life (WHO-QOL – 100) in adolescents with bipolar affective disorder currently in remission on clozapine and mood stabilizers respectively

Domains of WHO-QOL-100	Clozapine group n=20 (Mean±SD)	Mood stabilizer group n=20 (Mean±SD)	T	df	P
Physical	55.10±9.31	49.55±9.60	1.855	38	0.071
Psychological	60.20±9.25	56.85±10.97	1.043	38	0.304
Level of independence	60.00±7.68	62.35±8.61	-.911	38	0.368
Social relationship	65.90±14.75	64.70±12.77	.275	38	0.785
Environment	66.95±11.18	60.05±9.95	2.061	38	**0.046****
Spirituality	83.65±11.68	73.75±19.58	1.942	38	0.060

**Significant at p<0.01 level (2-tailed))

Relationship between different Domains of Whoqol and Clozapine and Mood Stabilizer Group

There was significant difference in the domain of environment scale between clozapine and mood stabilizer group as shown in table 5, indicating that patients with clozapine faired better in the environment domain of WHO-QOL-100. However there were no significant differences in other domains of WHO Quality of Life - 100 between clozapine and mood stabilizer group, although trend towards better QOL in clozapine group was observed in physical and spirituality domain. One of the possible explanations for this better quality of life observed in clozapine group may be due to fact that clozapine group had suffered significantly less medication related side effects as compared to mood stabilizer group. Although studies related to head to head comparison between quality of life on clozapine and mood stabilizer in adolescent population are hard to find, comparison between other atypical antipsychotic used as monotherapy and compared when added to mood stabilizers do exists. In one of this kind of study (Namjoshi, 2004) investigated quality-of life improvements in patients with bipolar disorder treated with olanzapine added to lithium or valproate for 6 weeks (Namjoshi, 2004). Patients receiving olanzapine added to a mood stabilizer experienced statistically more significant clinical improvements (as measured by YMRS and the Hamilton Depression Scale) than patients treated with a mood stabilizer alone. These improvements were complemented by significant improvements on the measure of quality of life (Lehman's QLI), and these improvements were greater in patients treated with olanzapine added to a mood stabilizer than in patients treated with a mood stabilizer alone. This study suggests that as individuals treated with olanzapine in combination with a mood stabilizer improve clinically, they also become more satisfied with their social functioning, including improvements in interactions with friends and family, and their living situation. Quality of life was measured indirectly in risperidone studies using the Global Assessment of Functioning Scale.

Assessment of global functioning was performed in two 3-week acute studies of risperidone compared with placebo and in an open-label 9-week extension to these acute trials. In the acute trial, patients treated with risperidone improved statistically more significantly than placebo-treated patients on measures of global functioning; these improvements were sustained during the 9 weeks of open label treatment with risperidone. At the end of 12 weeks of treatment with risperidone, more than 60% of individuals achieved good global functioning scores (Hirschfeld *et al.,* 2005). These studies shows that patient perception of quality of life is quit better on atypical antipsychotics than those receiving mood stabilizers alone. Similar finding has been observed in present study.

CONCLUSION

Present study showed that quality of life of remitted bipolar adolescent patients does not differ significantly between those treated with clozapine or mood stabilizers. However patients treated with clozapine showed better quality of life in single domain of WHOQOL scale and suffered fewer medication related side effects. Thus this study concludes that clozapine may be a better alternative to mood stabilizers when medication related adverse drug effects are considered in adolescent patients with bipolar affective disorder.

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