ISSN 1996-3351

Asian Journal of Biological Sciences

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Asian Journal of Biological Sciences 2 (1): 29-34, 2009
ISSN 1996-3351
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Quality of Life and Global Functioning Among Chronic Type I Bipolar Disorder Patients in Comparison With a General Population in Iran

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Abstract: Current psychiatry research is focused on various aspects of Quality Of Life (QOL) in different disorders especially bipolar disorder. Frequent depressive episodes, coupled with being a chronic disease causes less satisfaction with quality of life among bipolar patients. The purpose of this study was to assess the QOL and general functioning among chronic type I bipolar disorder patients. One hundred patients who had bipolar-I disorder according to the criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) for 10 years, were selected. Besides demographic characteristics, number of manic-depressive episodes, drug consumption and substance dependency, quality of life questionnaire [Short Form Health Survey (SF-36)] including bodily pain, physical function, role limitation-physical, general health, vitality, social function, role limitation-emotional and mental health, were completed and global functioning of the patients were evaluated by Global Assessment Functioning (GAF) scales. Of 100 patients, 50% were women. Family history of bipolar disorder was positive in 35% of studied patients. Cigarette smoking was seen in 26% patients, while 73% of the patients reported use of drugs regularly. The patients had significantly lower scores than the general population on all scales except role limitation-physical and role limitation-emotional that was significant statistically ($p<0.05$). In patients with substance abuse, the mean of general functioning level, social function and role limitation-physical was better than non-drug user patients ($p<0.001$). Bipolar disorder is a chronic psychological disease influenced all aspects of QOL. Social, occupational and financial support of the patients and their family are necessary.

Key words: Depression, mania , manic-depression, global functioning, quality of life

INTRODUCTION

Currently, psychiatric research emphasizes on the importance of Quality Of Life (QOL) in different disorders, especially bipolar disorder (Pyne *et al*., 1997). QOL presents physical, emotional, social, occupational and mental health status of an individual (WHOQOL Groups, 1995; Patrick and Erickson, 1993). Forty five percent of bipolar disorder patients present several recurrence of the disease, in spite of good quality of life. Incomplete remission is seen in 30% of the patients (Benjamin and Virginia, 2005, 2007) So that, it seems QOL in bipolar patients is lower than the general population (Arnold *et al*., 2000; Robb *et al*., 1997). Recurrent depressive episode causes decreasing satisfaction and QOL in bipolar disorder patients, even during euthymic periods (Cooke *et al*., 1996). Herein we assessed the QOL and global functioning among chronic type-I bipolar disorder patients in our country (Iran).

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MATERIALS AND METHODS

One-hundred medical records from 246 of patients who had bipolar disorder according to the criteria of DSM IV-TR from 1996 or before and were admitted to the Zare Psychiatric Hospital between 1999 to 2000, were selected randomly. Using personal data recorded in the patients' chart, was contacted the patients' family and after presenting the aim of the study, they were invited to be referred to the hospital for evaluation of their patients. All patients or their family signed informed consents. Patients who were not referred for evaluation were excluded and the other patients included in the study randomly. Then, a senior psychiatrist performed a psychiatric interview with patients and their family and completed a demographic self-administered questionnaire, along with quality of life questionnaire (SF-36) (Montazeri *et al*., 2005). Demographic questionnaire consisted of variables such as age, sex and marital status and education, location of residency, drug consumption and substance dependence. Iranian version of quality of life questionnaire (SF-36) is designed to evaluate functioning of outpatient bipolar disorder patients who were asymptomatic in recent months, with no need to be admitted and assessed eight items; bodily pain, physical function, role limitation-physical, general health, vitality, social function, role limitation-emotional and mental health. In addition, the questionnaire briefly scored the physical and psychological status at the end of evaluation. Montazeri *et al*. (2005) in a study confirmed validity and reliability of the questionnaire with α-krohnebachk level of 0.77-0.9 for Iranian patients. Finally, Global Assessment Functioning (GAF) scales (Benjamin and Virginia, 2005). Determined general functioning scale. Statistical data analysis were performed using SPSS soft ware, χ^2 test, pearson's correlation coefficient, ANOVA and Duncan test.

RESULTS

One-hundred outpatient patients who had chronic bipolar disorder according to the criteria of DSM-IV-TR for the past 10 years, enrolled in the study. Patients had a mean age of 39.3 years (21-70). Men and women were represented equally. The demographic characteristics of patients are shown in Table 1.

Thirty five percent of the patients had positive family history of bipolar disorder among first and the second rank of family relations. Cigarette smoking and using other substances were seen in 26 and 7%, respectively. All of the patients lived near their family or relatives. Regarding the type of bipolar

Table 1: Demographic characteristics of the study sample

Variables	Number
Sex	
Man	50
Woman	50
Age groups (year)	
20-35	40
36-50	40
>50	19
Marital status	
Married	69
Single	24
Separated or divorced	7
Education	
Uneducated or low educated	51
High school	42
Graduate	6
Location of residency	
Urban	47
Rural	53

Table 2: Positive and negative characteristics of the research variables

Variables	Positive	Negative
Family history of bipolar disorder	35	65
Cigarette smoking	26	74
Using other substance	7	93
Living with family	100	0
Taken medicine regularly	73	27

Table 3: Mean and SD of scores obtained in each domain of quality of life

Domains	Mean±SD of general population	Mean±SD of the sample	p-value
Bodily Pain (BD)	79/4 (25/1)	72.9(24.9)	0.05
Physical Function (PF)	85/3 (20/8)	68.4(29)	0*
Role Physical (RP)	70 (38)	76(39.4)	-
General health (GH)	67.5 (20.4)	56.8(19.5)	0*
Vitality (VT)	65.8 (17.3)	49.7(17.9)	0*
Social Function (SF)	76 (24.4)	65(31.3)	0.001*
Role Emotional (RE)	65.6 (41.4)	64.6(46.3)	-
Mental Health (MH)	67 (18)	58.8(17.1)	0*
Physical Component Summery (PCS)	50 (10)	47.1(8.8)	0.005*
Mental Component Summery (MCS)	50 (10)	42.6(11.4)	0*
Global Assessment Function (GAF)	-	62.2(14.5)	

*It was statistically significant

disorders, 38% of patients had experienced a manic-depressive episode, while 59% had pure mania episode (Table 2). In the present study, the average age at onset of bipolar disorder was 20 to 40 years (52%) in most of the cases. After that, the age at onset of the disorder was 15 to 20 years (41%). In addition, the ages at onset of the disorder prior to15 years and after 40 years were 3 and 4% respectively. Seventy three percent of the patients reported regularly taken drugs by being referred to the private office (21%) and governmental hospitals (79%). The remaining cases (28%) had no use of drug or had irregularly taken drugs.

Domains of Quality of Life

Table 3 briefly presents the mean of eight domains of quality of life in bipolar disorder patients evaluated by questionnaire (SF-36) and compared with mean of general population. In addition, the mean of Global Assessment Function (GAF), Physical Component Summery (PCS) and Mental Component Summery (MCS) is shown in Table 3.

Correlation Between Quality of Life and Demographic Characteristics

The mean of eight categories of quality of life evaluated by SF-36, general function and PCS was not different between two genders. There was only a significant difference in area of MCS between two sexes ($p<0.001$), as it was higher in men.

According to pearson's correlation coefficient, whatever the age is higher, GAF ($p<0.05$), PF ($p<0.01$) and PCS ($p<0.001$) are lower and there were no relationship in other domains.

No statistically significant differences appeared between the mean of GAF, PF among different married status ($p<0.05$). It was demonstrated by using Don Ken test that GAF and PF in divorced patients were lower than married, single and separated patients ($\alpha'<0.05$). There was no significant difference between mean of eight categories and global function among patients residing in urban and rural areas.

The mean of GAF and BP was different among various levels of education ($p<0.05$). Using DonKen test, the mean of GAF and BP was significantly different between less educated or high school subjects and graduate subjects ($\alpha'<0.05$). GAF was higher, while BP was lower in these subjects.

Relationship Between Quality of Life and other Indexes

The mean of RE and MCS among patients with positive family history of bipolar disorder was lower than patients with negative family history of bipolar disorder. No statistically significant differences were found between the two groups ($p<0.01$, $p<0.05$).

The mean of eight domains of QOL was not significantly different among smokers, drug users and non drug- users.

The mean of PF and RP were statistically significant among different groups regarding age at onset of the disease ($p<0.05$). According to Duncan test, the mean of RP in patients with age at onset of the disease older than 40 years, was lower than others age groups ($p<0.05$).

The mean of GAF, SF, MCS, RP and PCS were statistically significant between patients using drug regularly and non drug user patients ($p<0.05$, $p<0.001$).

There were no differences between number of depressive and/or mania episode and the mean of eight categories and GAF among the patients.

DISCUSSION

The results of present study show that women had lower scores in the all domains of SF-36 (except PF with equal number) that was not significantly different in each of domains. The MCS score in men was higher and the difference was significant. As with Robb *et al*. (1998), present results showed that men had higher score of MCS than women. Of course, in Robb *et al*. (1998), study, significant differences were found in areas of BP and PF. Similar to Robb *et al*. (1997) results, this study confirms that the mean of GAF was higher in women than men and was not statistically significant.

Similar to Ozar *et al*. (2002) study, these results confirmed that the age at onset of disease did not influence the mean of eight categories and GAF, except RP that was lower in patients with age at onset > 40 years. In Ozar *et al*. (2002) study the age of first episode of the disease was not a predictor of lower score domains. However, Perlis *et al*. (2004) demonstrated that lower age at onset of diseases, was a significant predictor of lower quality of life.

The findings of this study suggest that the mean of all domains of QOL, PCS, MCS and GAF in patients with bipolar disorders are lower than general population. The mean of all domains of QOL, expect RP and RE was significantly different. This result was confirmed by Simon *et al*. (1998) using SF-36 questionnaire. They found that the mean of PF in bipolar disorder was good quality (63.8-91.2). The mean of PF in this study was 68.4 ± 29. In addition, Kusznir *et al*. (2000) evaluated QOL of their patients with OPQ questionnaire and found that the adequate domain of SF did not exist in one-third of bipolar patients. Wells and Sherburne (1999) found that bipolar disorder patients had lower SF level than unipolar patients, dysthymic and transient depressive patient and with only higher than major depression patients. The results of present study and Ozar *et al*. (2002) and Ten Have *et al*. (2002) confirmed the result of Wells' study in bipolar patients and demonstrated that the patients had lower MH score, than patients with other disorders such as affective disorders, neurotic disorders, addicts, or non-psychotic disorders.

As with Ozar *et al*. (2002), there was no difference between the number of depressive or mania episode and the mean of domains in present study. MacQueen *et al*. (2000) in a study demonstrated that number of depressive episode was more effective than manic episode regarding quality of life. In Leidy *et al*. (1998) study, in which bipolar patients compared with euthymic patients, had higher score in domains of VT, RE, RP.

According to present results, patients who used drugs regularly, have higher scores in all domains of QOL, in which significant differences were seen in SF, PCS, MCS, RP and GAF. Moreover, Namjoshi *et al*. (2002) and Shi *et al*. (2004) showed that patients taking Olanzapine, had higher scores in domains of PF, BP, VT, SF and GH (Leidy *et al*., 1998).

CONCLUSION

Considering that bipolar disorder is a chronic psychological disease and has influence on all domains of QOL, frequent follow-up of the patients, home visits and drug availability is recommended to promote QOL. Financial, occupational and social supports of the patients and their family are undeniably necessary.

ACKNOWLEDGMENT

The authors offer Mrs. S. Shahmohamadi (CRNA), research fellow at Clinical Research Development Center of Boo-Ali Sina Hospital Sari/Iran, their profound thanks for her liberal cooperation.

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