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Guest Editorial / Misafir Editoryal

Functioning and Quality of Life in Bipolar Disorder

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INTRODUCTION

Bipolar disorder (BD) is characterized by an episodic course, and nearly full remission is expected interepisodically. Even though full remission is achieved symptomatically, there is a gap in terms of functioning and quality of life (QOL). In the McLean-Harvard First Episode Mania Study (1), over 2 years, most subjects achieved syndromal recovery (98%, with 50% achieving recovery within 5.4 weeks); 72% achieved symptomatic recovery. However, only 43% achieved functional recovery. Similarly, in another study, at six-month follow-up, symptomatic outcome was clearly superior to functional outcome (2). Almost 80% of patients were symptom-free or mildly symptomatic. However, only 43% of patients were employed, and only 21% were working at their expected level of employment. Thirty percent were rated as being unable to work (2). Beyond the symptomatic follow-up of bipolar patients, it is crucial to monitor subjective and objective well-being of bipolar patients during the course of the illness.

Quality of Life Constructs in Bipolar Disorder

QOL describes the subjective perception of the individual about his/her functioning and well-being. It is defined by the World Health Organization as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns (3). In assessing the QOL in BD, besides mood symptoms, psychosocial and financial aspects of life are taken into consideration (4). Also, QOL assessments have to be useful for gaining insights into adherence problems and patient preference. Health-related QOL (HRQOL) is significantly affected in patients with BD, a chronic affective disorder characterized by mood fluctuations, sleep and cognitive impairment, and impact on interpersonal relationships, all of which contribute to HRQOL impairment (5). Michalak et al. (6) examined the relationship between HRQOL and BD; specifically, they studied how BD impacts HRQOL. The authors concluded that BD had a profoundly negative effect on patients' QOL, particularly in the areas of education, vocation, financial functioning, social support, and intimate relationships. When the subjects were asked to prioritize these domains, the majority of patients ranked social support as the most important determinant of HRQOL. In addition to standard domains of QOL which are taken into consideration in most of the chronic conditions, domains such as routine, independence, spirituality, or stigma should also be assessed (7).

Findings of Impairment for Functioning in Bipolar Disorder

Occupational functioning is one of the key impairments in BD. In the study reported by Dion et al. (2), only 21% of bipolar patients achieve the expected level of occupational functioning. In a Turkish study where the Bipolar Disorder Functioning Questionnaire was developed (8), only 66% of the patients were working in a job actively.

Social functioning is far below the expected level, and patients never reach their premorbid level of social functioning after the mood episodes (9). Patients tend to experience high social anxiety in social encounters, which seems to be caused by self-stigmatization and low self-esteem (10). Another factor affecting social functioning in BD is the impairment in recognizing and discriminating facial emotional expressions, and in remitted bipolar patients deficits in facial emotional identification have a negative impact on participation to social activities and daily activities and hobbies (11).

Family functioning is also affected negatively, since bipolar patients do not take their essential role in household activities and do not participate in family affairs (8). Also, the burden on caretakers of bipolar patients is substantial (12).

Comparison of Bipolar Patients and Healthy Controls in Terms of Quality of Life

Gutierrez-Rojas et al. (13) analyzed 108 patients with BD against a control group of 1,200 from the general population. It was found that patients with BD reached lower scores in the mental and physical components of HRQOL. It was hypothesized that the low physical component scores are secondary to substance abuse and other comorbidities of BD. Zhang et al. (14) also confirmed this result and found that depressive symptoms in BD were a strong predictor of impaired HRQOL, as evident by lower SF-36 (both mental and physical scores) and Q-LES-Q overall scores in these patients as compared to those with euthymia, mania/hypomania, and the general population.

Comparison of Bipolar Patients with Chronic Physical Conditions

HRQOL of patients with BD was assessed alongside those with chronic back pain in a population-based control sample. Patients with BD had a lower mental component score on the SF-36 but a higher physical component than the back pain group. Additionally, both groups had comparably lower scores in the role limitation emotional categories and both had lower scores than the general population in the physical and mental components (15). Even though bipolar patients have a somewhat better physical QOL than patients with chronic medical conditions, their role limitations and role functioning are equally impaired.

HRQOL in BD Compared to HRQOL in Other Psychiatric Disorders

In a Finnish study with a large sample size, it is reported that schizoaffective disorder had the lowest HRQOL, followed by BD-I and schizophrenia, which showed comparable losses of HRQOL assessed with EQ-5D (16). In another study, it was found that patients with BD or schizophrenia when in remission had similarly poor HRQOL levels in all four domains of the WHOQOL-BREF (17). In a Turkish study carried out at Dokuz Eylul University's Department of Psychiatry with WHOQOL-BREF, patients with alcohol dependence, BD, and schizophrenia scored lower than healthy subjects in the physical aspects of QOL. Patients with schizophrenia had lower scores in the psychological domain compared to patients with BD, patients with diabetes, and healthy subjects. In the social relationship domain, patients with schizophrenia and alcohol dependence scored lower compared to healthy subjects. Patients with schizophrenia were worse with respect to social relationships than patients with BD and diabetics (18).

Factors Affecting Quality of Life and Functioning in Bipolar Disorder

Mood symptoms are the most evaluated factor affecting QOL in BD. Depressive symptoms are found

to be the main predictor of functioning in bipolar patients. In an Argentinian study, the time spent with subsyndromal depressive symptomatology was an independent predictor of long-term psychosocial functioning assessed with the GAF (19). Subsyndromal depressive symptomatology was related with functional role impairments in multiple domains (20). In a Turkish study, Ozer et al. (21) reported that (i) QOL was predicted by current subthreshold depressive symptoms; (ii) the number of previous depressive episodes and current subthreshold depressive and manic symptoms predicted disability; (iii) the number of previous depressive episodes and the duration of hospitalization as well as current subthreshold depressive and manic symptoms predicted overall functioning; (iv) the number and distress level of life events were correlated with suicidal symptom. In our study, we similarly found that residual depressive symptoms are found to impair social functions such as social engagement, interpersonal behavior, prosocial activities, recreation, independence-performance and competency and employment (22). However, it is reported that patients during hypomania seem to have improved functioning and QOL (23). As the type episode, the number of previous mixed episodes is another predictor of the overall functional impairment, and is associated with difficulties in interpersonal relationships, difficulties with financial issues, and poor cognitive functioning (24). A large epidemiological survey conducted in the United States showed that subsyndromal forms of mixed episodes had a negative impact on occupational functioning and marital relationships (25).

Neurocognitive impairment also negatively affects functioning and QOL in bipolar patients. Martino et al. (19) found that impairments in attention and executive functioning were independent predictors of FAST score explaining 28% of variance. In the analysis, they found that impairments in measures of attention, executive function, and verbal memory were independent predictors of functional outcome level one year later.

In the course of bipolar illness, patients experiencing more episodes have sustained impairment in multiple areas of psychosocial functioning (26). Thus, patients with first-episode BD had better functioning than those with multiple-episode BD in areas such as autonomy, occupation, cognition, interpersonal relationships, and leisure time. In accordance with the number of previous episodes, the number of previous hospitalizations also was a predictor of poor overall functioning, especially in occupational and autonomy domains. The number of previous hospitalizations may represent a marker of severity of illness and of worse long-term course of the illness, and seems to be particularly associated with occupational impairment (24).

Type of BD is studied as a factor affecting functioning. Both subgroups of patients, bipolar I and bipolar II, show lower overall functioning in each domain of the FAST scale when compared to the healthy control group (27). Furthermore, bipolar II patients scored worse in the cognitive domain compared to bipolar I patients. These results suggest that bipolar II patients are as disabled as bipolar I patients. This may be explained, in part, by the fact that bipolar II patients experience greater lifetime residual depressive symptoms than the bipolar I subgroup, which may have a particular impact on cognitive domains of functioning.

Pharmacotherapy for BD is also considered as a cause of impairment in functioning. However, there is a controversy on this issue, because in double-blind clinical trials, besides mood symptoms, functioning ratings are also monitored. In these trials, since the power analysis is designed to prove superiority, all treatment options seem to improve functioning in bipolar patients. However, the design of clinical trials is to treat acute mood episodes and achieve response, or even remission. Thus, when symptom reduction is obtained, it is expected to obtain improvement in psychosocial functioning. However, even with this improvement, patients do not achieve premorbid level of functioning (5). In our study, we found that second generation antipsychotics (SGA) in combination with mood stabilizers (MS) seem to affect psychosocial functioning negatively (28). In patients on MS+SGA, autonomy, interpersonal relations, and leisure time activities were impaired when compared with patients on MS solely.

Assessing Subjective Versus Objective Well-being in Bipolar Patients

It is known that patients with BD are not sufficiently aware of their disease, especially in terms of their cognitive deficits (29). Thus, they do not express their deficits in subjective assessments (30). Martínez-Arán et al. (31) reported objective cognitive impairment in patients who complain of their cognitive deficits; but they also found significant cognitive deficits in patients without complaints. Burdick et al. (32) reported that most of the BP patients with BD have objective cognitive deficits, but that they are unable to report them accurately, and may even ignore them.

Rating Instruments for Functioning and Quality of Life in Bipolar Disorder

Functioning ratings are considered the main assessment tool for psychosocial well-being of bipolar patients, since disability and impairment in functioning are superior to QOL for an accurate assessment. On the other hand, compared to observer-rated instruments, self-rated instruments are highly subjective, potentially fluid and open to distortion, making it challenging to measure reliably and accurately (7). Subjective QOL in bipolar patients may not accurately reflect objective functional outcome status (33).

Bipolar Disorder Functioning Questionnaire (BDFQ)

As the Scientific Section for Mood Disorders of the Psychiatric Association of Turkey, we have developed a functioning questionnaire for BDs (8).

The questionnaire consists of eleven subscales and contains 58 items; the subscales are emotional functioning, cognitive functioning, sexual functioning, feelings of stigmatization, social withdrawal, household relations, relations with friends, participation in social activities, daily activities and hobbies, taking initiative and realizing his/her potential, and occupation. The scale was applied to 252 patients at 15 Mood Disorders from different regions of Turkey. The mean age of the patients was 38.6±12.1, and 56% (n=141) were female. The mean duration of the BD was 11.9 years, and the mean number of previous episodes was 6.5. Two hundred thirty (91.3%) of the patients were diagnosed with bipolar I disorder, and the other 22 (8.7%) patients had bipolar II disorder.

Cronbach's alpha coefficient was calculated to be 0.91. The item-total scale correlations varied between 0.22 and 0.86. In test-retest reliability, the correlation between the two ratings was high (r=0.82). In validity analyses, 13 factors were obtained representing 65.1% of the total variance in exploratory factor analysis. In confirmatory factor analysis, 11 domains fit the model with an RMSEA of 0.061. BDFQ significantly correlated with GAF (r=0.428). BDFQ also showed significantly negative correlation with the Hamilton Rating Scale for Depression (HAM-D) (r=-0.541) and the Young Mania Rating Scale (YMRS) (r=-0.365). Discrimination between patients (mean score=111.8±15.2) and healthy subjects (mean score=121.4±10.4) was good (t=-2.300).

Functioning Assessment Short Test (FAST)

Functioning Assessment Short Test (FAST) was developed by Rosa et al. (34) for quickly assessing functioning in BD. FAST is a 24-item interviewer-rated instrument using a 4-point Likert-type scale (0=no difficulty, 3=severe difficulty). It consists of six dimensions: autonomy, occupational functioning, cognitive functioning, financial issues, interpersonal relations, and leisure time. Higher score indicates worse functioning.

The validation study for Turkish was performed by Aydemir and Uykur (30). In the reliability analyses, Cronbach's alpha coefficient of internal consistency was calculated to be 0.960, and test-retest reliability coefficient was found to be 0.945. In the validity analyses, exploratory factor analysis obtained five factors representing social functioning, occupational functioning, autonomy, cognitive functioning, and financial issues. In the confirmatory factor analysis, comparative fit index was found to be 0.912 and

RMSEA value was 0.085. In the concurrent validity analyses, the domains of FAST were poorly to moderately correlated with the subscales of BDFQ. FAST discriminated bipolar patients with symptomatic episodes and remitted patients from healthy controls. The area under the ROC curve was found to be 0.824.

Quality of Life in Bipolar Disorder (QOL.BD)

In a series of three studies, a tailor-made instrument for rating QOL in BD intending to assess across all mood states was developed (35). Generating the items of the questionnaire, a revised set of 14 domain subscales was indicated: Physical, Sleep, Mood, Cognition, Leisure, Social, Spirituality, Finances, Household, Self-esteem, Independence, Identity, Work, and Education. All analyses led to a 56-item, 14-domain questionnaire, the QoL.BD. It was decided that item content would be a simple assertion about the self over the past seven days, with a response format between disagreeing and agreeing. Given this decision, the choice of a 5-point Likert response format was relatively straightforward. The 5-point "strongly disagree-strongly agree" response format is psychometrically powerful and efficient, being probably the best understood response format in psychometric psychology.

Interventions for Impairment in Functioning in Bipolar Disorder

To improve cognitive functions and thus daily executive functions of bipolar patients, a functional remediation intervention was designed by the Barcelona group (36). The functional remediation program consisted of 21 weekly sessions, each lasting 90 minutes. This intervention addresses neurocognitive issues such as attention, memory, and executive functions, but it focuses even more on enhancing functioning in daily routine. The content of the intervention is based on ecological tasks to be performed in two settings, in the clinic as well as at home. Patients were trained with exercises for memory, attention, problem solving and reasoning, multitasking, and organization in order to improve their functional outcome. Most of the techniques were based on paper-and-pencil tasks and group activities. The functional remediation program seemed to help in occupational aspects, which in turn could augment economic autonomy and decrease financial dependence on others. A significant enhancement in interpersonal relationships was also observed in the functional remediation group. Functional remediation was not associated with a significantly greater improvement in the cognitive domain of the FAST. Even though the functional remediation group was separated from the treatment as the usual group in terms of functional efficacy, it was not different from the psychoeducation group.

CONCLUSION

Subjective and objective well-being of bipolar patients is important in the longitudinal course of the illness. Even though patients achieve symptom remission, functional impairment still exists. Thorough assessment of psychosocial functioning of the patients should be carried out during follow-up visits. Besides symptom reduction, special interventions to enhance psychosocial functioning should be planned.

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