Psychoeducation Efficacy in Bipolar Disorders: Beyond Compliance Enhancement

Francesc Colom, Psy.D., M.Sc., Ph.D.; Eduard Vieta, M.D., Ph.D.;
María Reinares, Psy.D., Ph.D.; Anabel Martínez-Arán, Psy.D., Ph.D.;
Carla Torrent, Psy.D., Ph.D.; José Manuel Goikolea, M.D.;
and Cristòbal Gastó, M.D., Ph.D.

Background: Several previous studies have established that low treatment adherence is common among bipolar patients and may explain high rates of recurrence. On the other hand, some patients keep relapsing even when they strictly follow their prescribed somatic treatments. Psychological interventions such as psychoeducation may foster early recognition of prodromal symptoms and minimize the risk of relapse. To date, studies assessing the usefulness of psychoeducation in fully compliant patients are lacking.

Method: This was a single-blind, randomized, prospective clinical trial on the efficacy of group psychoeducation in remitted fully compliant DSM-IV bipolar I patients (N = 25) who were compared with a group with similar characteristics (N = 25) who did not receive psychoeducation. All patients received naturalistic pharmacologic treatment. Recruitment began in 1997 and follow-up was completed in January 2002. The follow-up phase comprised 2 years during which all patients continued receiving naturalistic treatment without psychological intervention and were assessed monthly on several outcome measures.

Results: At the end of the 2-year follow-up, 23 subjects (92%) in the control group fulfilled criteria for recurrence versus 15 patients (60%) in the psychoeducation group (p < .01). The number of total recurrences and the number of depressive episodes were significantly lower in psychoeducated patients.

Conclusion: Although the present study has the limitation of small sample size, psychoeducation showed its efficacy in preventing relapses in bipolar I patients who were adherent to drug treatment. The action of psychoeducation seems to go beyond compliance enhancement and may support a tripod model composed by lifestyle regularity and healthy habits, early detection of prodromal signs followed by prompt drug intervention, and finally treatment compliance.

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Adherence problems, a common feature among bipolar samples,[1] has deserved great attention by the existing psychoeducational and cognitive-behavioral intervention programs.[2–6] Unfortunately, some patients keep on suffering relapses even when they strictly follow their prescribed somatic treatments. In addition to increasing compliance, psychoeducation may focus on early recognition of symptoms of relapse, such as hyperactivity and reduced need for sleep,[7] minimizing the risk of hospitalization through modifications of the daily therapeutic regimen. Individual intervention in teaching patients to identify early symptoms of relapse has been shown to be highly effective in preventing new episodes and improving social functioning,[8] and cognitive-behavioral therapy has been reported to be useful in preventing relapses among lithium-treated bipolar patients,[9] but to date studies assessing the usefulness of psychoeducation in fully compliant patients are lacking. Once psychoeducation has been shown to be effective in preventing recurrences,[2] the next step is to see if its action goes beyond adherence improvement. Hereby, we present a randomized single-blind study on the efficacy of psychoeducation in euthymic patients with optimal treatment adherence.

METHOD

The design of the study was identical to another study published elsewhere,[2] with the exception that this one en-

Table 1. Contents of the Psychoeducative Program (Barcelona Bipolar Disorders Program)

1. Introduction
2. What is bipolar illness?
3. Causal and triggering factors
4. Symptoms (I): mania and hypomania
5. Symptoms (II): depression and mixed episodes
6. Course and outcome
7. Treatment (I): mood stabilizers
8. Treatment (II): antimanic agents
9. Treatment (III): antidepressants
10. Serum levels: lithium, carbamazepine, and valproate
11. Pregnancy and genetic counseling
12. Psychopharmacology vs alternative therapies
13. Risks associated with treatment withdrawal
14. Alcohol and street drugs: risks in bipolar illness
15. Early detection of manic and hypomanic episodes
16. Early detection of depressive and mixed episodes
17. What to do when a new phase is detected?
18. Lifestyle regularity
19. Stress management techniques
20. Problem-solving techniques
21. Final session

rolled only highly compliant bipolar I patients, in order to address whether the efficacy of psychoeducation went beyond the simple improvement of adherence to medication.

Sample

Fifty patients fulfilling DSM-IV criteria for bipolar disorder type I aged 18 to 65 years were recruited from a sample of 400 patients enrolled in the naturalistic prospective follow-up of the Bipolar Disorders Program of the Hospital Clinic at the University of Barcelona (Spain). Inclusion criteria included a lifetime diagnosis of DSM-IV bipolar I disorder elicited by a trained psychiatrist, being euthymic (Young Mania Rating Scale [YMRS] < 6, Hamilton Rating Scale for Depression [HAM-D] < 8) for at least 6 months, sufficient data on the prior course of illness collected from a prospective follow-up of at least 24 months, good treatment compliance during at least 6 months prior to the study, and written consent to participate in the study. Exclusion criteria were DSM-IV Axis I comorbidity—except caffeine and nicotine dependence, mental retardation (IQ < 70), and organic brain damage. Patients receiving any kind of psychotherapy or enrolled in any pharmacologic trial during the study were also excluded.

Study Design

The study consisted of 2 phases: the treatment phase comprised 20 weeks of randomized psychological treatment in which all patients received standard psychiatric care with naturalistic pharmacologic treatment. The experimental group received additional psychoeducation, while the patients assigned to the control group met every week in groups of 8 to 12 patients without special instructions from the therapist. This design was aimed to control the variability induced by the possible supportive effect of the group reunions themselves.

The follow-up phase comprised 2 years during which all patients continued receiving naturalistic treatment without psychological intervention and were assessed monthly on several outcome measures. The treatment phase began in 1997, and the follow-up phase was completed in January 2002.

After written informed consent was signed, patients were assessed at baseline and randomized, with groups stratified by number of previous episodes. Randomization was performed by a computerized random-number generator, ensuring restricted randomization. Randomization was run and controlled by a coworker (J. Sánchez-Moreno, Psy.D.) completely independent from the study assessment. Sample size consisted of 25 subjects per treatment group.

Treatment

Standard psychiatric care (all patients). All patients were seen by their psychiatrist every 4 weeks and were specifically told to go to the center whenever they felt any change in their mood or any other problem such as insomnia. The psychiatrists had a minimum of 4 years of clinical and research experience in the specific care of bipolar patients.

Patients received naturalistic treatment following the treatment algorithms of the Barcelona Bipolar Disorders Program (available upon request). Psychiatrists were blind to the nature of the psychological treatment given to the patients, who were specifically told not to give any detail about the nature of their psychological treatment to their psychiatrists. When detected, prodromal signs were handled equally for both treatment conditions. No formal psychotherapy or specific psychoeducation provided by the psychiatrist was allowed.

Psychoeducation (experimental group). Patients assigned to experimental treatment received standard psychiatric care and were enrolled in a psychoeducational program (available upon request) composed of 20 sessions of 90 minutes each aimed at improving 4 main issues: illness awareness, treatment compliance, early detection of prodromal symptoms and relapse, and lifestyle regularity.

The program, which has similarities to other existing programs' focus on symptom monitoring, treatment adherence, and illness management skills,[4,5] was performed in an 8- to 12-patient group setting and conducted by 2 experienced psychologists. The structure of each session consisted of a presentation of 30 to 40 minutes about the topic of the day, followed by some exercise regarding the issue (for instance, drawing a life-chart, writing a list of potential triggering factors). Discussion was encouraged. Table 1 shows the contents of the tested psychoeducative intervention.

Control Group Procedures

In addition to standard pharmacologic treatment, patients assigned to the control group received an interven-

Table 2. Baseline Characteristics of the Bipolar I Sample

Characteristic	Control Group (N = 25) N (%)	Psychoeducation Group (N = 25) N (%)	χ^2	df	p
Female gender	16 (64)	15 (60)	0.08	1	NS
Psychotic features (lifetime)	19 (76)	23 (92)	2.38	1	NS
Axis II comorbidity	8 (32)	4 (16)	1.75	1	NS
Treatment					
Lithium	13 (52)	16 (64)	0.73	1	NS
Mood stabilizers	5 (20)	6 (24)	0.11	1	NS
Combination therapy					
Antidepressants	5 (20)	9 (36)	0.20	1	NS
Atypical antipsychotics	4 (16)	8 (32)	1.75	1	NS
Conventional antipsychotics	7 (28)	7 (28)	0	1	NS
	Mean (SD)	Mean (SD)	t		p
Age, y	34.48 (7.80)	35.36 (10.87)	−0.33		NS
Age at onset, y	23.12 (7.36)	22.96 (7.05)	0.08		NS
Total number of previous episodes	9.56 (6.46)	9.24 (6.59)	0.17		NS

Abbreviations: df = degrees of freedom, NS = nonsignificant.

tion consisting of 20 weekly group meetings of 8 to 12 patients with the same 2 psychologists who tried not to give any psychoeducational feedback except for that from patient interaction. The psychologists did not address any topic but encouraging communication among patients. If asked, the therapists tried to reply and give back the question as an open topic for discussion. Issues concerning mainly illness awareness, social stigma, and need for treatment appeared quite often, without any feedback from the therapist. Patients included in the control group received exactly the same care by the members of the program (availability, surveillance, number of visits) with the logical exception of the psychological intervention that was being tested.

Assessments

All subjects were assessed monthly by the study psychiatrists and every 2 weeks by a research assistant who had instructions to contact the study psychiatrist if a relapse was suspected. Both—psychiatrist and research assistant—were blind to treatment, and patients were requested not to reveal significant details.

All patients participating in this study had been previously enrolled in the naturalistic prospective follow-up of the Barcelona Bipolar Disorders Program for at least 2 years. This follow-up includes assessment of relapses, symptom checking, and treatment registration, which is performed at least every 2 months. Baseline assessment includes the administration of Structured Clinical Interview for DSM-IV (SCID-I and SCID-II),[10–12] and also YMRS,[13,14] HAM-D,[15] and the Holmes and Rahe[16] inventory for stressful life events, which are also repeated every 2 months.

Psychiatric medication and reasons for its change were recorded. Number of hospitalizations, reasons for admission, and the total number of days that the patient remained hospitalized were also recorded.

Assessment of compliance. Compliance was assessed by the combination of a compliance-focused interview with the patient, a compliance-focused interview with significant first-degree relatives or partner, and plasma concentrations of mood stabilizers. This method has been extensively explained elsewhere.[1] Patients were included only if the 3 assessments indicated good compliance. Compliance assessment was performed every 3 months with the intention of excluding from the study any patient who fulfilled criteria for poor compliance, which never occurred during the study.

Definition of recurrence. The primary outcome measure was recurrence, which was defined as scoring 12 or above on the YMRS or the HAM-D. After relapse was confirmed, DSM-IV criteria were applied to address the polarity of the episode.

Group Characteristics and Patient Flow

The baseline characteristics of the subjects are shown in Table 2. No significant differences in clinical course prior to the study were found. Pharmacologic treatment was fully comparable at baseline between both groups. No patient abandoned the study or the therapy groups.

Statistics

Comparison of baseline characteristics of the sample was made by chi-square analysis for categorical variables such as sex, polarity of first episode, history of rapid cycling, seasonal pattern, psychotic features, history of suicide attempts, Axis II comorbidity, and type of treatment received, using Fisher z when needed and Student t test for quantitative variables. The separate analysis at follow-up of the number of patients who relapsed for each condition was by chi-square. The comparison of the mean number of relapses during the treatment and the follow-up phase was made through Student t test. Recurrence-free curve analyses were by Kaplan-Meyer's survival analysis and included all patients, even the noncompleters, as this was an "intention-to-treat" analysis. Statistical significance was set for all cases at p < .05.
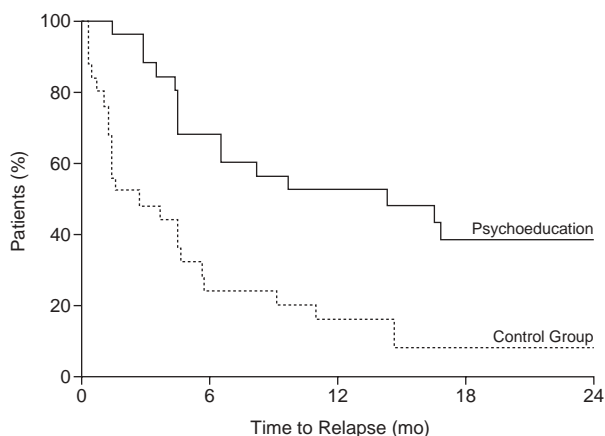
RESULTS

Recurrences

During the treatment phase, 14 subjects (56%) in the control group fulfilled criteria for recurrence (mania, hypomania, mixed episode, or depression) compared with 4 (16%) in the psychoeducation group (p < .005). At the end of the follow-up phase (2 years), 23 subjects (92%) in

Table 3. Number of Bipolar I Patients Who Relapsed During the Treatment and the Follow-Up Phase[a]

| | Treatment Phase | | | | Follow-Up Phase | | | |
| | Control Group | Psychoeducation Group | | | Control Group | Psychoeducation Group | | |
State	N (%)	N (%)	χ^2	p	N (%)	N (%)	χ^2	p
Any relapse	14 (56)	4 (16)	8.68	.003	23 (92)	15 (60)	7.01	.008
Mania or hypomania	9 (36)	3 (12)	3.94	.04	20 (80)	12 (48)	5.55	.01
Mania	5 (20)	0	5.55	.01	11 (44)	4 (16)	4.66	.03
Hypomania	5 (20)	3 (12)	0.59	NS	14 (56)	10 (40)	1.28	NS
Mixed	6 (24)	1 (4)	4.15	.04	12 (48)	5 (20)	4.36	.03
Depression	5 (20)	1 (4)	3.03	NS	16 (64)	6 (24)	8.11	.004

[a]Relapses do not sum to the total number of patients because some patients had more than 1 relapse.
Abbreviation: NS = nonsignificant.

Figure 1. Survival Analysis of Relapsed Bipolar I Patients

DISCUSSION

Although the present study has the limitation of small sample size, it may give some empirical support to the extended idea of the usefulness of psychotherapy in bipolar disorders beyond a mere improvement of drug treatment adherence.

In our study, psychoeducation was associated with a significant reduction of the total number of episodes, which was maintained throughout the 2-year follow-up. Interestingly, this difference in total episodes started in the treatment phase, which may suggest the importance of habit modification as it may be a more easily applied technique as a first step of a psychoeducative program than prodromal detection. However, early detection of prodromal signs plays, in our opinion, a central role in the long-term reduction of recurrences.

Our sample is representative of patients suffering from very severe bipolar disorders, as our Barcelona Bipolar Disorders Program is the reference center for the treatment of complex bipolar patients from a wide area including more than 6 million people. It may partly explain the severity of some of the patients included in the present study, the high relapse rates found even in compliant psychoeducated patients, and the need for combination treatment for most of them. From this perspective, the contribution of well-designed psychotherapeutic interventions will be even more noticeable for difficult and severe patients than for the rest, but this may also limit the generalization of our results to similar samples.

Our program is a long intervention that usually lasts for 6 months and includes several interventions targeted to several topics. The whole program is mainly psychoeducation focused, although other behavioral factors that may go beyond information (lifestyle regularity, stress management[17]) are included. Psychoeducation definitely means more than providing information to our patients. Clinical implications of the present study may rest on considering psychoeducative programs as an add-on treatment even for those patients who are not having adherence problems, as all patients may benefit from psychoeducation if this includes several issues. In clinical

the control group fulfilled criteria for recurrence versus 15 patients (60%) in the psychoeducation group. This difference was statistically significant (p < .01). Table 3 shows the number of relapsed patients detailed per type of episode. Survival analysis of patients remaining in remission showed the higher time-to-relapse of patients included in psychoeducation groups (log rank = 11.52, df = 1, p = .007), as shown in Figure 1.

The number of total recurrences and the number of depressive episodes were significantly lower in psychoeducated patients. There were no significant differences regarding pharmacologic treatment or mood-stabilizer blood levels during the study or at the end of the follow-up.

Hospitalizations

During the treatment phase, 4 patients (16%) in the control group were hospitalized due to recurrence. No patient in the treatment group was hospitalized during the treatment phase (p = .03). At the end of the follow-up period, 9 patients (36%) in the control group had been hospitalized versus 2 (8%) in the treatment group (p = .01).

practice, we may tailor our psychoeducative intervention to fit our patients' needs and weaknesses.

Although the role of psychoeducation in enhancing treatment adherence has been widely reported,[18] the weight of psychoeducation seems to go beyond compliance enhancement and may support a tripod model composed of (1) lifestyle regularity and healthy habits, (2) prodromal signs detection and early intervention, and (3) treatment compliance.

Drug name: carbamazepine (Tegretol, Epitol, and others).

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