Bipolar affective disorder and psychoeducation

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Submitted: 2013-03-03 Accepted: 2013-03-13 Published online: 2013-05-05

Key words: **bipolar disorder; psychoeducation; psychotherapy; psychosocial intervention; family intervention; prodromes; insight; expressed emotions**

Neuroendocrinol Lett 2013; **34**(2):83–96 **PMID:** 23645303 NEL340213R01

Abstract

OBJECTIVE: Bipolar affective disorder runs a natural course of frequent relapses and recurrences. Despite significant strides in the pharmacological treatment of bipolar disorder, most bipolar patients cannot be treated only by drugs. The limitations of using medication alone in symptomatic, relapse prevention, and satisfaction/quality of life terms have long prompted interest in wider forms of management. One of the promising way how to enhance remission seems to be combination of pharmacotherapy and psychoeducation.

METHODS: Studies were identified through PUBMED, Web of Science and Scopus databases as well as existing reviews. The search terms included "bipolar disorder", "psychoeducation", "psychotherapy", "psychosocial treatment", "family therapy", "individual therapy", "group therapy", and "psychoeducation". The search was performed by repeated use of the words in different combinations with no language or time limitations. This article is a review with conclusions concerned with psychoeducation in bipolar disorder.

CONCLUSIONS: Randomized controlled trials of cognitive behavioral therapy, interpersonal and social rhythm therapy, individual, group and family psychoeducation show that these approaches augment stabilizing effect of pharmacotherapy. Patients and their families should be educated about bipolar disorder, triggers, warning signs, mood relapse, suicidal ideation, and the effectiveness of early intervention to reduce complications. Psychosocial approaches are important therapeutic strategies for reducing relapse and rehospitalization in bipolar disorder.

INTRODUCTION

Bipolar disorder (BD) is characterized by recurrent episodes of mania or depression. It is a disabling, recurrent psychiatric disorder of variable severity. There are 2 types: bipolar disorder type I and type II (BD-I and BD-II). Taken together, their prevalence is estimated to be about 3.7% (Hirschfeld *et al.* 2003, Angst 1998). According to World Health Organization is bipolar disorder the 12th most common disabling condition in the world for any age group causing moderate to severe impairment (WHO 2004). The mean age at disorder onset is 18 years in bipolar I disorder and 22 years in bipolar II disorder

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(Merikangas *et al.* 2007). Suicide rates are 20times higher in patients with bipolar disorders than in the general population (Novick *et al.* 2010, Prasko *et al.* 2010). It is one of the highest rates of all psychiatric diagnosis (Cassidy 2011). Research indicates that bipolar disorders, schizophrenia, and major depressive disorders could share biologic vulnerability and inheritance etiology (Van Snellenberg and de Candia 2009, Sidlova *et al.* 2011). Environmental factors are associated with the inheritance pattern (Goldstein *et al.* 2010). These factors include stressful life events, particularly death or suicide of a close person; sleep-wake cycle dysregulation; and high expressed emotions in family (Proudfoot *et al.* 2010, Latalova *et al.* 2012). It seems that quality of life (QOL) in bipolar patients is lower than in patients with other mood disorders and anxiety disorders, but higher than in schizophrenia (Michalak *et al.* 2008, Latalova *et al.* 2010b, Latalova *et al.* 2011).

Treatment of mood episodes depends on the present type phase: mania, hypomania, mixed state, depression, or maintenance. Unfortunately, suboptimal follow-through of treatment can lead to endless cycle of relapse and rehospitalization. The BD treatment is mostly pharmacotherapeutic (Keller *et al.* 1993). Despite significant success in the pharmacological treatment, most bipolar patients cannot have drug treatment alone. Up to 50% of BD I patients do not recover from acute manic episodes within 1 year. Only 25% of patients achieve full functional recovery (Keck *et al.* 1998). Mood stabilizers do not prevent about 20% to 40% of bipolar patients from disease relapse (Moncrief 1995, Solomon *et al.* 1995). The newer mood stabilizers such as lamotrigine are as effective as lithium (Bowden 2000).

METHOD

A review with conclusions about psychoeducation in bipolar disorder was performed. Articles were identified through PUBMED, Web of Science and Scopus databases. The search terms included „bipolar disorder", „psychoeducation", „psychotherapy", „psychosocial treatment", „family therapy", „individual therapy", „group therapy", and „psychoeducation". The search was done by repeated use of the words in different combinations. The acquired articles were sorted by their relevance and key articles were identified. Reference lists of publications obtained by these procedures were hand-searched for additional relevant articles. The resulting review also includes information from monographs referred to by other reviews.

PRESSING ISSUES IN PSYCHOTHERAPY AND PSYCHOEDUCATION

Patients with bipolar disorder suffer from the consequences of previous episodes and they are permanently vulnerabilr to future episodes as well. The acute and maintenance treatment may be limited by side effects of medications. Between episodes many patients show emotional instability, subsyndromal or residual symptoms. Residual symptoms at recovery are significantly associated with shorter time to relapse (Perlis *et al.* 2006). Modern psychological research of BP, which guides the development of psychotherapeutic approaches for this disorder, emphasized several areas of interest (Lam 2002, Latalova *et al.* 2012): non adherence to pharmacotherapy, emotional consequences of past episodes of mania or depression, awareness that one suffers from a serious, potentially chronic mental disorder and the problem of stigma, little awareness of precipitants and triggers that start an episode, delay or deviance in personal maturation and deficits in social cognitions, impairment of social rhythms and routine, expressed emotion in family members, personality disorder, fear of disease relapse , difficulties in interpersonal relationships, problems in work status and progress, legal, social, and emotional problems as a result of reckless, inadequate, antisocial or violent behavior during the episodes.

Non adherence to pharmacotherapy

The major problem limiting the outcome of many patients is non-adherence to maintenance medication (Devulapalli *et al.* 2010, Gonzalez-Pinto *et al.* 2010). In prospective observational study with a manic/mixed episode in EMBLEM (European Mania in Bipolar Longitudinal Evaluation of Medication), where the 1341 patients were analyzed, were 23.6% of probands non-adherent in 21 months follow-up. Non-adherence was associated with an increased risk of relapse, recurrence, rehospitalization, and suicide attempts (Hong *et al.* 2011). Cognitive problems, like lack of insight, and comorbid substance use disorders constitute principal risk factors for non-adherence (Velligan *et al.* 2009). Impaired insight was observed in 47% of remitted BD I patients (Varga *et al.* 2006).

Emotional and cognitional consequences of past episodes of mania or depression

Emotional and cognitive styles of patients may be influenced by the impacts of episodes and may lead to subdyndromal swings of mood that could predict (Alloy *et al.* 1999). There are several dysfunctional cognitions that can be understood as characteristics for bipolar disorder and be mood-state dependent too. But some cognitions may be resilient to mood improvement. The most of dysfunctional attitudes reduces following the mood-induction procedure but there are dysfunctional attitudes for the factor of autonomy which continued (Lomax & Lam 2011). The implication of these findings in the BD treatment and prevention could be important. The prediction of the behavioral activation system (BAS) was studied researching high levels of reward or frustration. It will take longer time to patients suffering from bipolar disorder to come back to baseline levels of BAS acitivity than controls (Wright *et al.* 2008). Eighty individuals (40 euthymic BD I, 40 controls) completed daily measurements for 28 days. There were no differ-

ences between bipolars and controls in levels of reward and frustration, magnitude of initial response, or time to recovery. Recovery after frustration was extended in patients with history of both depression and mania. In patients with history of mania was proloned activation following reward. Positive life events could trigger hypomania/mania and negative life events trigger bipolar depression (Alloy *et al.* 1999, Hammen *et al.* 1997, Makoff-Schwartz *et al.* 1998, Johnson *et al.* 2000, Johnson *et al.* 2008). These results are consistent with model of BAS which suggests that people with bipolar disorders are hypersensitive to triggers signaling opportunity for reward or failure and loss. When looking at research made by Urosević *et al.* (2010) we can see that patients with cyclothymia and BD II describe increase rates of BAS-activation and BAS-deactivation, but they do not experience goal-attainment life events. In their work Lex *et al.* (2008) compared 19 bipolars in remission and 19 healthy controls. All participants fulfilled Beck Depression Inventory, Dysfunctional Attitude Scale, Automatic Thoughts Questionnaire, Emotional Stroop Test, and an incidental recall task. The result is that patients with remitted bipolar disorder did not show cognitive vulnerability if they reported only subthreshold levels of depression.

Realization that a patient suffers from a serious, potentially chronic mental disorder and the problem of stigma

Stigma and self-stigmatization may greatly affect an individual's decision to seek treatment resulting in delaying or avoiding treatment all together (Corrigan and Watson 2002, Cooper *et al.* 2003). A qualitative study of stigma by Dinos *et al.* (2004) suggests that individuals with mood disorders may experience stigma differently when compared to individuals with psychotic disorders. In patients seeking treatment, stigma may be partially responsible for non-adherence to therapy (Sirey & Bruce 2005). It was also found that self-stigma is related to an impaired social functioning and decreased functioning in the workplace (Perlick *et al.* 2001). Stigmatization can lead to negative feelings about oneselves including: feelings like incompetence, shame, and overall low self-esteem (Goffman 1963). Lazowski *et al.* (2012) found that people with BD reported greater psychosocial influence of stigma on themselves and their family members in comparison with unipolar depression patients. Cerit *et al.* (2012) identified three predictors of functioning – severity of depression, perceived social support, and internalized stigma. Severity of symptoms is considered the strongest predictor, whereas self-stigmatization has a core role in predicting functioning.

Little awareness of precipitants and triggers that start an episode

Little awareness of precipitants and triggers that start an episode is typical. Typical precipitants of manic or hypomanic episodes include stressful life events, goal-attainment events, expressed emotion, antidepressant medications, disruption of circadian rhythm, seasonality, and childbirth. Some of these precipitants may also trigger a depressive episode (Proudfoot *et al.* 2011). It has been repeatedly found that psychosocial stress was increased before the onset of manic or depressive episodes (Johnson & Roberts 1995, Johnson *et al.* 2000). It has been considered in past that increased psychosocial stress is presented only before the first few episodes of bipolar disorder, but later studies proved, that these stressors are presented in all stages of illness (Hammen *et al.* 1989, Hammen & Gitlin 1997). A retrospective study found a relationship between stressful life events and the onset of manic episodes in bipolar disorder patients. The relationship was particularly strong for events involving a disruption of social rhythm with sleep deprivation (Malkoff-Schwartz *et al.* 2000). In a prospective study, 125 BD I patients were interviewed monthly for an average of 27 months (Johnson *et al.* 2008). Goal attainment life events predicted increases in manic symptoms. Similar events, however, have varying effects in different patients. This variability is partly due to the fact that patients differ in their susceptibility to develop an episode (Latalova *et al.* 2010a). Negative life events appear to predict increase in depressive symptoms, but the results are equivocal (Johnson *et al.* 2008). On the other hand, a certain number of episodes occur without any psychosocial provocation. There should be an effort to identify and so optimally minimize specific stressors that precede relapse mood disorders in a particular patient.

Early warning signs of a mood relapse include sleep disturbance, agitation, increased goal orientation, and disruption in usual routine. Symptoms during this early stage are known as prodromes (Lam & Wong 2005). Recognition of the prodromes is critically important for the long-term management of bipolar disorder. At least 50% and perhaps up to 92% of BD patients are able to identify a *prodrome* that precedes the onset of a full-blown episode. This proportion seems to be higher for manic than for depressive episodes (Altman *et al.* 1992, Lam & Wong 1997, Molnar *et al.* 1998; Smith & Tarrier 1992). Although it can still be difficult for some patients to identify prodromes because of present high level of dissociation (Latalova *et al.* 2010c). Patients' relatives have also demonstrated some ability to recognize prodromes (Latalova *et al.* 2012). Because development of mania may be preceded by prodromes for weeks, the early detection of these warning signs is particularly important. Early intervention can prevent a full development of mania (Lam & Wong 2001). The prodromes of manic episodes are manifestated by decreased sleep, more energy, irritability, increased sociability, increased optimism and confidence, racing thoughts, feelings of importance, and decreased concentration (Mantere *et al.* 2008; Goossens *et al.* 2010). The prodromes of depressive episodes include sadness, loss of energy and interest in surroundings, disturbed sleep, low self esteem, negative thinking, loss of concentration, anxiety, and obsessive worries (Smith & Tarrier 1992; Lam 2005, Mantere *et al.* 2008; Goossens *et al.* 2010).

Delay or deviance in personal maturation and deficits in social cognitions

Children and adolescents at risk for BD could develope dysfunctions in several areas of social life. This may be consequences of constitutions differences in brain development governing socio-emotional functioning or the result of discontinaution in normal development caused by mood dysregulation (Whitney *et al.* 2012). Deficits in social cognition could represent important characteristics involved in the etiopatogenesis of the disorder and could be an important predictor of social ability of patients with bipolar disorder. Patients display a marked deficit in emotional mentalizing abilities, which correlate with a number of epizodes (Montag *et al.* 2010).

Impairment of social rhythms and routine

Impairment of social rhythms and routine is an important factor that triggers an episode. Eight weeks preceding manic episode, a significant proportion of patients had experience an event that disrupts the rhythm of social habits (Makof-Schwartz *et al.* 1998). Bipolar patients also frequently recur when traveling across time zones (Lam & Wong 1997). Disruption of social rhythms and normal sleep-wake cycle may specifically lead to provocation of manic episodes, but not depression (Malkoff-Schwartz & Frank 1998). Thus patients and their family members should be informed about the potential effects of sleep disruption on the stability of bipolar disorder.

Expressed emotion

The role of familial expressed emotion has an impact on the number of relapses in bipolar patients. The higher degree of criticism or emotional over-involvement of significant others lead to the increase in the number of relapses and in the persistence of residual symptoms (Honig *et al.* 1997, Miklowitz *et al.* 2000; O'Connell *et al.* 1991). Also other interpersonal patterns such as high level of hostility, emotional coldness in marriage, excessive emotional interest, or exaggerated emotional involvement influence the course of the disorder (Miklowitz *et al.* 2003).

Personality disorder

Outcome of patients with bipolar disorder can be influenced by comorbidity. Comorbid personality disorders (PD) are frequent. In a study of 52 remitted bipolar patients, comorbid PD was diagnosed in 28.8% of patients. Dramatic/emotionally exaggerated and avoidant personality disorders were more common than odd/eccentric types of PDs (George *et al.* 2003). In another study of 117 unipolar and 60 bipolar patients, 38% of the bipolars met criteria for a comorbid PD. Narcissistic PD was more frequent in bipolar than in unipolar patients (Brieger *et al.* 2003). Obsessive-compulsive PD, borderline PD, and narcissistic PD are more prevalent in patients with bipolar disorder, whereas avoidant PD is more frequent in unipolar disorder (Brieger *et al.* 2003, Rossi *et al.* 2001, Prasko *et al.* 2010a). Patients with comorbid PD show a poorer outcome, a decreased psychosocial adaptation (Colom *et al.* 2000) and higher number of episodes (Vieta *et al.* 2001). Comorbidit with PD in euthymic patients predicted more difficult course, with decreased rate of employment, use of more psychiatric medications, and higher frequency of history of alcohol and substance use disorders (Kay *et al.* 2002). This comorbidity is also strongly associated with poor compliance (Colom *et al.* 2000).

Fear of disease relapse

Fear of relapse and subsequent decrease of psychosocial functioning are frequent in many bipolar patients, especially in women with children and college students (Lejeune 2011). This fear is connected with rumination. Rumination has been consistently implicated in the onset and maintenance of depression. Rumination about positive and negative emotion, as well as increased autonomic arousal, is associated with greater lifetime frequency of depression. Trait rumination about positive emotion is associated with higher frequency of manias (Gruber *et al.* 2011). An important goal of psychoeducation is loosing of affective control. It may arise as a result of fear of relaps. In the study of Russell and Browne (2005), people with BD who were able to cope with their fear of relapse actively, also remain well and the course of the disorder was rather positive. The treatment strategies used for coping with fear included acceptance of the disorder, psychoeducation, identifying triggers and warning signs, adequate amount of regular sleep, managing stress, medication and support networks.

Difficulties in interpersonal relationships

Difficulties in interpersonal relationships, including problems with the partnership, marriage and raising children are common. It could be connected to deficits of social cognition, but these difficulties are mostly consequences of the stress accompanying episodes of the disorder. The stress and expressed emotion increase when patients show poor compliance, higher relapse rate and more residual symptoms (Hammen & Gitlin 1997). Interpersonal problems also precede the development of bipolar disorder. People with BD have high rates of childhood trauma (Bücker *et al.* 2012). This may interact with genetic susceptibility factors (Etain *et al.* 2008) and it may be also associated with poorer cognitive function compared to healthy subjects. A study of Lever *et al.* (2002) shows that physical violence and sexual abuse in childhood or adolescence adversely affect the course of the disease in later years and increases the probability of suicide.

Problems in work status and progress

Impairment of work and social functioning was associated with decreased remission and recovery rates (Haro *et al.* 2011). Work disability was associated with three or more previous hospitalizations, repeated manic episodes, current depressive symptoms, rapid cycling, relationship status, living conditions and inversely with the educational level (Reed *et al.* 2010, Gutiérrez-Rojas *et al.* 2011). Abdel-

Bakie *et al.* (2013) showed that the majority of individuals suffering from early bipolar disorder resume productive activity rapidly when offered vocational case management within an early intervention program during a follow-up period of up to 5 years.

Legal, social, and emotional problems as a result of reckless, inadequate, antisocial or violent behavior during the episodes

Patients with major psychiatric disorders had substantially increased risks of multiple inprisonment over the 6year study period (Baillargeon *et al.* 2009). The main subject of criminal proceedings from psychiatric point of view is criminal responsibility. Bipolar disorders sometimes seem to be a neglected subject in legal scholarship (Gómez-Durán *et al.* 2010).

PSYCHOTHERAPEUTIC APPROACHES TO BIPOLAR PATIENTS

The first report about psychotherapy of bipolar disorder was published in 1954 (Cohen *et al.* 1954). Many different psychotherapeutic strategies of patients with BD have been studied since 90ies. The most studied approaches were interpersonal therapy and social rhythm therapy, cognitive and cognitive behavioral therapy, family therapy, and various types of psychoeducation including psychoeducation via internet (Prasko *et al.* 2007). In some patients, psychodynamic or existential psychotherapy can be used (Prasko *et al.* 2012).

Interpersonal therapy and social rhythm therapy

Many patients with bipolar disorder improve the emotional instability when holding daily routine activities (sleep, food, physical and social activities) (Makoff-Schwartz *et al.* 1998). These findings led to the development of a specific type of psychotherapy called interpersonal therapy and social rhythm therapy (IPSRT) (Ehlers *et al.* 1988, Frank 1999, Frank *et al.* 2001). IPSRT includes a program to help maintain a lifestyle with regular cycles of sleep and waking, meals and social incentives (Frank *et al.* 2000). Another part is an adaptation of interpersonal psychotherapy for depression. This part derives from an observation that bipolar disorder is often associated with poor interpersonal functioning, especially during the depressive phases (Fagiolini *et al.* 2005). Patients in remission are instructed to monitor and regulate daily routines, sleep/wake cycles and identify tiggers that could provoke changes to these routines.

Patients who have undergone IPSRT in combination with pharmacotherapy develop a significant improvement in the regularity of the rhythm of life compared with the control group treated with psychopharmacs only (Frank *et al.* 1997).

Frank *et al.* (2005) study different approaches in the treatment of BD I. The study compared four therapeutic strategies: acute and maintenance interpersonal and social rhythm therapy (IPSRT/IPSRT), acute and maintenance intensive clinical management (ICM/ICM), acute interpersonal and social rhythm therapy followed by maintenance intensive clinical management (IPSRT/ICM), and acute intensive clinical management followed by maintenance interpersonal and social rhythm therapy (ICM/IPSRT). The preventive maintenance phase lasted 2 years, with sessions tapered to monthly. Patients who received IPSRT during the acute phase had longer intervals of staying well in the maintenance phase than patients assigned to ICM in the acute phase. IPRSR was most effective in delaying recurrences in the maintenance phase then patients succeeded in stabilizing their social rhythms during the acute phase. Patients in the IPSRT group displayed higher regularity of social rhythms at the end of acute therapy. In contrast, IPRST initiated during a period of recovery was no more effective than ICM in preventing recurrences over 2 years (Frank *et al.* 2005). Secondary analyses revealed strong effects of IPSRT relative to ICM on depressive recurrences and a marginally significant effect on suicide attempts (Rucci *et al.* 2002).

Cognitive behavioral therapy

Some bipolar patients have pessimistic explanatory styles in the depressive phases and overly optimistic explanatory biases in the manic or hypomanic phases of the illness (Johnson & Roverts 1995). These thinking biases are the target of cognitive restructuring strategies. There is also significant relationship between deep personal attitudes (cognitive schemas) and the frequency of relapses. Cognitive therapy (CT) focuses on reducing vulnerability by teaching patients to reduce overall stress by revision of dysfunctional maladaptive attitudes (Zaretsky *et al.* 1999, Lam 2002). Attitudes like "I should still be successful in everything I do," "I should still be happy", etc. lead to the fact that patients are trying to be overly successful at the expense of regular diet, adequate sleep and physical activity (Scott 2004, Scott & Pope 2003). Correction of dysfunctional attitudes (cognitive restructuring) leads to an adjustment of daily habits that will allow patients to reduce a stressful event (Vyskocilova & Prasko 2012). Patients also learn to monitor prodromal symptoms. The effectiveness of CT and cognitive-behavioral therapy (CBT) was studied in several studies.

In the historically first study Cochran (1984) researched a six-session individual cognitive-behavioral therapy in a small-scale randomized, controlled trial involving 28 stable bipolar I patients. Relative to lithium alone, the intervention was successful over a 6month follow-up in promoting compliance, reducing the proportion of patients requiring hospitalization and those with mood episodes attributable to noncompliance.

Scott *et al.* (2001) compared the CT (n=21) with a waiting list (n=21). Patients were also randomly distributed. After 6 months the intervention group had significantly better results than the control group in both the degree of symptomatology, and in social functioning. In 18 months follow up 18 there were reducing the number

of relapses by 60% compared to the previous 18 months before treatment.

In a randomized controlled study, Lam *et al.* (2000) studied 103 vulnerable patients with frequent relapses who were using prophylactic medication. After the dividing to the intervention (14 sessions CBT) and to the control group (clinical management) they have monitored patients after treatment for another 6 months. The control group had only the standard pharmacological treatment. CBT approach was focused to understanding the role of biological vulnerability to stress, managing the sleep/wake rhythm, and warning symptoms intervention. The CBT group reported 44% relapse rate compared to 75% in the control group during one year. CBT patients had shorter hospital stay too and were better able to cope with prodromal symptoms of the mania and the remission period statistically extended. Group with CBT also showed significantly better social functioning.

Lam *et al.* (2003, 2005) identified 103 bipolar I and II patients who were in recovery but had at least three episodes in the past 5 years. Patients were randomly assigned to pharmacotherapy and 12–18 individual CBT sessions over 6 months or pharmacotherapy and routine care. The results over 1 year favored the CBT group (44% relapsed) over the routine care group (75%). Patients in CBT also had less and shorter hospitalizations, better social functioning, and higher medication adherence than those in routine care. At 30 months, the group difference in relapse rates was only significant for depressive relapses. Depression severity scores and days spent in depressive episodes were lower among CBT patients over 12 but not 30 months.

A single-site randomized, controlled trial (n=52) in Australia generally confirmed these results (Ball *et al.* 2006). Bipolar I and II patients who were euthymic or mildly symptomatic were randomly assigned to medication and 6 months (20 sessions) of CBT and "emotive techniques" (imagery, narratives, and reliving early experiences) or medication with brief psychoeducation (treatment as usual). Patients in CBT had lower depression scores at 6 months and tended to have longer times to depressive relapses over 18 months (p=0.06) but did not differ in overall relapse rates. Patients in CBT also had greater improvements in the severity of depressive symptoms relative to the 18 months preceding the study. As in the Lam *et al.* (2005) trial, the benefits of CBT on depression scores diminished over time, suggesting that booster sessions may be necessary for the maintenance of gains.

A five-site UK study of 253 bipolar I and II patients examined CBT in community centers serving highly recurrent patients (Scott *et al.* 2006). Patients in CBT underwent 22 sessions over 26 weeks, although patients attended an average of only 14 sessions (identical to the Lam *et al.* 2003 trial). CBT was effective in delaying recurrences among patients with fewer than 12 prior episodes.

A maintenance randomized, controlled trial in Canada examined the effects of CBT in addition to individual psychoeducation (Zaretsky *et al.* 2007, Zaretsky *et al.* 2008) among 79 fully remitted or minimally symptomatic bipolar I and II patients on stable medications. All subjects received 7 individual sessions of psychoeducation derived from a structured CBT manual; half also received 13 individual sessions of CBT. There were no differences in relapses or rehospitalization rates between the 2 study arms, but the patients in CBT had a 50% lower number of days in depressed mood and fewer antidepressant dosage increases over the study year.

Nevertheless not all studies found conclusively that the addition of psychotherapy to pharmacotherapy improves outcomes (Lam 2006). In biggest trial in the field Scott *et al.* (2006a) compared the effectiveness of treatment as usual with an additional 22 sessions of CBT. Patients were assessed every 8 weeks for 18 months. More than half of the patients had a recurrence by 18 months, with no significant differences between groups. Post hoc analysis showed that adjunctive CBT was significantly more effective than treatment as usual in patients with less than 12 previous episodes, but not so effective in patients with more episodes. Meta-analysis of relapse of six studies showed no relationship between number of episodes and relapses by endpoint though (Lam *et al.* 2009).

Scott *et al.* (2007) published meta-analysis of 8 randomized controlled treatment trials of psychotherapies added to pharmacotherapy vs. pharmacotherapy alone. It showed a significant reduction in relapse rates (of about 40%) compared to standard treatment alone. Psychosocial approaches were the most effective in preventing relapses in patients who were euthymic when recruited into the trial, and was less effective in bipolar patients with a high number of previous relapses (>12).

Parikh with colleagues (2012) have concluded an effectiveness study of CBT versus psychoeducation across 4 Canadian sites with bipolar I and II patients (n=204) in full or partial remission. Participants were randomized to either 20 individual sessions of cognitive-behavioral therapy or 6 sessions of group psychoeducation. Severity of symptoms and morbidity were assessed over 72 weeks. Both treatments had similar outcomes with respect to reduction of severity of symptoms and the likelihood of relapse. The cost of psychoeducation was $180 per subject compared to cognitive-behavioral therapy with $1,200 per subject.

The results of these trials yield inconsistent conclusions regarding the effectiveness of CBT. CBT may be more effective among recovered and less recurrent patients than among severely ill, highly recurrent patients. The effects of CBT on depressive outcomes appear to be more robust than on manic outcomes, except when medication compliance is the focus of treatment. Alternatively, differences among the studies in sample populations (e.g., number of prior episodes, clinical status at admission), therapy training procedures, consistency of the intervention components

across settings, and other site or protocol variables may account for the discrepant results (Miklowitz 2008).

PSYCHOEDUCATION

Psychoeducation is an intervention aimed at providing patients and their relatives sufficiently comprehensive and relevant information about disorder. It was defined as a systematic didactic psychotherapeutic intervention designed to inform patients and their relatives about the disorder and to promote coping. Patients and their families should be educated about mood relapse, suicidal ideation, and the effectiveness of early intervention to reduce complications (Prasko *et al.* 2010b). It is strongly focused on behavioral techniques aimed to help with stress management, elimination of communication traps in the family leading to expressed emotions, and training in early detection of signs of impending deterioration in mental state (Prasko *et al.* 2011a).

Psychoeducation objectives

Reviews (Beynon *et al.* 2008, Scott 2006, Zaretsky *et al.* 2007) have shown that psychoeducation is the active ingredient in most forms of psychotherapy for bipolar illness. The primary goal of psychoeducation is to understand what is going on, to increase insight, compliance with pharmacotherapy, to reduce the fear associated with BD, to improve psychosocial functioning between episodes and reduce the likelihood, severity and duration of subsequent episodes (Kahn 1993). Supervision is not needed (Prasko *et al.* 2011, Vyskocilova *et al.* 2011).

TYPES OF PSYCHOEDUCATION PROGRAMS

Psychoeducational programs (PEP) has been conducted in a variety of ways. They usually consist of 6 or more sessions, and the duration of such programs is ranged from 1 to 18 months (Prasko *et al.* 2007). The certain psychoeducation models encompass individual consultation, group or family psychoeducation (Colon *et al.* 2003), family therapy (Marsh 2001, Miklowitz 2008), professional lead/guidance, short-term family education programs (Mannion 2000), and family-led support groups. Despite different models and frameworks, these programs are all focused on basic areas, such as explanation of bipolar disorder, education about pharmacotherapy, social rhythms, warning signs, coping with the stress, management of problem behavior, accessing available resources, and problem solving.

Individual psychoeducation

Psychoeducation is based on idea that patients who learn about BD disorder, develop relapse prevention plans, stay adherent with medications, and implement illness management strategies (e.g., keeping regular sleep/wake cycles), they stay well for longer periods of time. Didactic information may reduce the stigma associated with the disorder and increase the likelihood that patients obtain necessary treatment (Miklowitz 2008). In the only randomized, controlled trial of individual psychoeducation (Perry *et al.* 1999), 69 remitted BD I patients were randomly assigned to pharmacotherapy with routine care or pharmacotherapy with 7–12 sessions of psychoeducation. The results over 18 months indicated clear benefits for individual psychoeducation on the likelihood of manic recurrences (27% of patients versus 57% in routine care) and the time to first manic relapse as in but not on time to depressive recurrences. Possibly, the prodromal symptoms of depressive relapse are less distinctive than of manic recurrences, and the emergency treatment options less clear cut.

Group psychoeducation

Group psychoeducation (GPE) has been administered in two formats: alone (as adjunctive to medications) or as part of a larger systematic care intervention. The benefits of group psychoeducation have the potential to be long lasting, up to 2 (Colon *et al.* 2003) and 5 years (Colon *et al.* 2009a). Psychoeducation can be targeted to the patient to improve outcomes, enhance compliance, and increase knowledge, including early relapse recognition, thereby contributing to a better sense of well-being (Prasko *et al.* 2011a). Interactions between group participants may affect their emotional support and practical help which is extended to the post-intervention period (Citron *et al.* 1999).

In a study conducted in Barcelona, Colom *et al.* (2003a, 2003b) randomly divided 120 remitted BD I and II patients into 2 groups; boht groups had 9 months therapy. First was treated with 21 group sessions of structured psychoeducation and the second by 21-session unstructured support group. Over a 2-year study, the results strongly favored psychoeducation group: 66.7% of the group psychoeducation patients versus 91.7% of the unstructured group patients had recur-

Tab. 1. General targets of the psychoeducation in bipolar disorder.

• Provide basic information on bipolar disorder (psychoeducation)
• Reduce denial and encourage acceptance of illness
• Repair incorrect assumptions about the disease (clinical picture, course, treatment))
• Strengthen adherence and collaboration with a psychiatrist
• Teach the patient to monitor the mood of the day
• Learn to observe the rhythmic activity and enhance social rhythm in life
• Reinforce patient confidence in the ability to cope with environmental influences (provoking and stress factors)
• Teach the patient to recognize early signs of illness
• Make a plan to prevent relapse
• Increase social and occupational functioning

rences. Somewhat puzzling was the observation that patients were more likely to drop out of the structured groups (26.6%) than the unstructured groups (11.6%). Nonetheless, patients in group psychoeducation maintained higher lithium levels over the 2-year study. These results above were maintained over the next 5 years with substantial reductions in rehospitalizations and improvements in functioning (Colom *et al.* 2009a). Analysis of subgroups showed greater improvements with psychoeducation versus control intervention also in bipolar II disorder (Colom *et al.* 2009b).

Similar non-didactically delivered narrative group psychoeducation with 12 sessions has been more effective than treatment as usual in two randomized controlled trials in Australia in reduction of relapses (Castle *et al.* 2010, D´Souza *et al.* 2010).

Two studies have examined GPE within the context of overall systems of care. Bauer *et al.* (2006) administered a collaborative chronic care treatment consisting of evidence-based pharmacotherapy, a nurse care coordinator assigned to each patient to enhance adherence to treatment, regular telephone monitoring of prodromal mood symptoms, and a structured "life goals" program consisting of 5 weekly followed by twice monthly group sessions for up to 3 years. The GPE focused on relapse prevention strategies, medication adherence, and illness management. Patients in a treatment-as-usual group received usual VA care, which included medication sessions and occasional psychotherapy. The study contained 306 bipolar I patients, 87% of whom began as inpatients. Over 3 years, patients in the collaborative care intervention had 6.2 fewer weeks in affective episodes, 4.5 weeks of which were attributable to reductions in the length of manic episodes. There were no differences between the collaborative care and the treatment-as-usual groups in the length of depressive episodes. Broad effects of the care intervention were found on social and work functioning, quality of life, and treatment satisfaction. The group differences were not statistically reliable until 2 years, suggesting a delayed effect of psychoeducation and facilitated collaboration with care providers.

A study with a nearly identical design was carried out by Simon *et al.* (2006) who randomly assigned 441 patients to a 2-year systematic collaborative care program or treatment as usual (typically medication management visits). The probability of a new manic episode was significantly lower in the systematic care group over the eight assessment points of the study. Like the above study, there were no effects of systematic care on depression severity, weeks depressed, or depressive recurrences. The effects on mania severity scores were only observed among the 343 patients with moderate to severe symptoms at entry.

Family psychoeducation

On the base of previous researches of emotional expression were developed family psychoeducation interventions. These programs are based on fact that patients released from hospital to families with high expression of hostility, criticism, and emotional overinvelvement had higher probability of exacerbation of their symptoms, relapse and rehospitalization (Miklowitz *et al.* 2003, Lex *et al.* 2008, Proudfoot *et al.* 2010). Families of BP patients may be affected in many ways by affecting family relations, work, leisure, family health, children, and social relationships (Latalova *et al.* 2011). They may not have the necessary knowledge and skills. As a result, patient can relapse and be rehospitalized. Coping with early warning signs is an effective approach to preventing relapse in BD. Cooperation with relatives in relapse prevention has been shown to increase the effectiveness of psychoeducation approaches. However, family-focused intervention has typically used highly trained therapists, who are not available within routine clinical services (Peters *et al.* 2011).

A single-family intervention usually provides support for family members by: (a) information about bipolar disorder, (b) providing key knowledge about patient management and possibilities of coping with the BD and its symptoms, (c) enlightening how to identify and solve the specific health problems and (d) understanding of the needs of an individual family accurately. Imparting factual materials is also a fundamental component of many educational interventions.

There was developed a short-term family therapy approach for the hospitalized patients with schizophrenia or BD (6 sessions in average) (Haas *et al.* 1988). Objectives included the acceptance of disease, identifying triggers of the episodes, identifying the potential presence of these stressors in family, planning procedures minimalizing these stressors, and leading the family to accept long-term treatment of patients after discharge from hospital. In the initial evaluation of this study this approach was found significantly efficient. In the follow-up of this group with 11-month therapy pair, a significant improvement in overall functioning and compliance in treatment was found in all the patients. However, this group was too small (42 people) to evaluate a reduction in risk of relapse.

One small trial (n=33) found that acutely ill patients receiving an 11-month psychoeducational marital intervention had better adherence to medication and greater improvements in functioning than patients receiving pharmacotherapy alone (Clarkin *et al.* 1998).

In families with highly expressed emotions patients with BP have significantly worse course of the disorder. Treatment focused on family psychoeducation is dedicated, practicing communication skills training and systematic problems in the period after remission failure (Miklowitz *et al.* 1998). In a controlled study of Miklowitz *et al.* (2000) significantly fewer relapses occurred during the following year in the group that underwent than in those who had only two family educational sessions. The greatest importance was the FFT for patients from families with high emotional expressivity.

Miklowitz *et al.* (2003) had conducted 3 trials of family-focused therapy, which consist of 21 sessions of psy-

choeducation, communication enhancement training, and problem-solving. Family-focused therapy (FFT) emphasizes strategies for regulating one's emotions and enhancing interpersonal communication when facing conflicts (e.g., reflective listening; actively requesting support from family members). In the first trial (Miklowitz *et al.* 2003), authors randomly assigned 101 adult patients shortly after an acute manic, mixed, or depressive episode to FFT and pharmacotherapy or two sessions of family-based crisis management and pharmacotherapy. Over 2 years, patients treated by FFT had a greater likelihood of survival without disease relapse (52%) than patients in crisis management (17%) and survived longer without recurrence (mean=73.5 weeks) than patients in crisis management (53.2 weeks). The effects of FFT were stronger on depressive (p=0.005) than manic symptoms (p<0.05). The effects of FFT on depressive symptoms appeared to be mediated by improvements in communication between patient and relatives in a laboratory-based family interaction task (Simoneau *et al.* 1999). In contrast, the effects of FFT on mania symptoms appeared to be mediated by improvements in patients' adherence with lithium and anticonvulsant regiment. In a second trial (Rea *et al.* 2003), authors examined FFT and pharmacotherapy versus an individual therapy and pharmacotherapy in 53 bipolar I patients hospitalized for a manic episode. The individual therapy was of identical frequency (21 sessions) and length (9 months) and contained many of the same psychoeducational elements as FFT. At 1 year, no differences emerged in recurrence rates. However, over a 1–2 year posttreatment period, patients in family-focused therapy had a 28% recurrence rate and a 12% rehospitalization rate, compared to a 60% recurrence rate and a 60% rehospitalization rate for individual therapy. Mean survival times prior to recurrences were also longer in the FFT group. Third randomized trial examined the effects of adjunctive FFT (21 sessions), or a 3-session psychoeducational treatment on subsyndromally or acutely ill adolescents (mean age=14.5) who had at least one episode of bipolar spectrum disorder in the prior 3 months. Adolescents assigned to FFT had more rapid recoveries from depressive states, spent less time in acute depressive episodes, and had a more favorable trajectory of depressive symptoms over 2 years than adolescents receiving pharmacotherapy and brief psychoeducation. The effects of FFT were not significant for manic symptoms (Miklowitz *et al.* 2008).

Multifamily psychoeducation groups

Working with multiple families at once could be more cost-effective than working with families individually (Miklowitz 2008). Moreover, Maton (1993) point out to the importance of understanding the helpful environment within an educational and supportive group for family members of a mentally ill patient.

Miller and associates (Miller *et al.* 2004, Miller *et al.* 2008) assigned 92 acutely ill (75% manic) bipolar I patients to pharmacotherapy alone, pharmacotherapy plus 12 sessions of single-family therapy (based on problem-centered systems therapy), or pharmacotherapy plus six sessions of multi-family psychoeducation groups. Over 28 months no differences emerged between the 3 groups in time needed for recovery or recurrence. However, patients from families that were initially high in conflict or low in problem-solving and who received either form of family therapy had approximately half as many depressive episodes per year and spent less time in depressive episodes than those who received pharmacotherapy alone. There were no effects of either family intervention on mania symptoms and no differences in the outcomes of patients who received single family therapy or multifamily groups.

One study examined the effects of caregiver psychoeducation groups that did not involve patients (Reinares *et al.* 2008). Participants were caregivers (62 parents and 45 partners) of 113 bipolar I and II patients treated at a bipolar clinic at the University of Barcelona, Spain. The caregivers were randomly assigned to 12 weeks of group psychoeducation or treatment as usual. The caregiver groups focused on illness management skills (e.g., early detection of prodromes), medication adherence, effective communication, and problem-solving. Over a 12-month posttreatment follow-up, patients whose relatives attended the groups had longer survival times prior to hypomanic or manic recurrences than patients in treatment as usual but did not differ on time to depressive or mixed episodes. Thus, caregivers were able to identify and intervene with patients' manic prodromes without the input of the patients. In contrast, patient involvement may be necessary to extend the benefits of multifamily groups to the alleviation of depressive symptoms.

STEP-BD: comparison of treatments for bipolar depression

Few of the trials reviewed above compared 2 or more active treatments. In the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) (Miklowitz *et al.* 2007a, 2007b), an effectiveness study carried out in 15 US sites, 293 acutely depressed patients with bipolar I or II disorder were randomly assigned to medication or any of 4 evidence-based psychosocial treatments: 30 weekly and biweekly sessions of family-focused therapy, interpersonal and social rhythm therapy, CBT, or a three-session psychoeducational control called collaborative care. Unlike prior studies, the primary outcome variable was recovery from an acute depressive episode. Over 1 year, being treated by any of the 3 intensive psychotherapies, was associated with a faster recovery rate (169 days versus 279 days) from acute depression than being in collaborative care (Miklowitz *et al.* 2007a). Patients in intensive treatment were also 1.58 times more likely to be well in any month of the 1-year study than patients in collaborative care. Patients in intensive psychotherapy also had greater

gains in functional outcomes, including relationship functioning and life satisfaction, even after functioning scores were adjusted for concurrent levels of depression (Miklowitz *et al.* 2007b).

The results of STEP-BD underline the power of adjunctive psychosocial approaches, but also their limitations. Despite the availability of up to 30 sessions of care, patients attended an average of 14.3 (SD=11.4) sessions only. Another fact is that only 54% of the patients had family members available to assist in family-focused therapy or other treatments. Psychotherapies affected relationship functioning but not vocational functioning; possibly, cognitive rehabilitation programs such as those for schizophrenia could be adapted to bipolar disorder (McGurk *et al.* 2007). Nonetheless, bipolar patients with acute depression seem to require more intensive psychotherapy than is usually offered in a community care. Possibly, the common ingredients of these intensive psychotherapies – such as teaching strategies to regulate mood states and resolve key interpersonal or family problems – contribute to more rapid recoveries and better functioning after a depressive episode.

Internet-based psychoeducation for patients with bipolar disorder

The cost of time of patient and therapist, training, and travelling are some of disadvantages of face-to-face psychosocial interventions including group psychoeducation. In collaboration with bipolar patients, their families and health professionals Barnes *et al.* (2011) developed an internet-based psychoeducational intervention called "Beating Bipolar". The program includes a mix of different helping mechanisms, with initial face-to-face delivery, followed by internet-based interactive program with important informations and ongoing support via a web forum (Simpson *et al.* 2009). The core characteristics are: (a) the diagnosis of the disorder; b) understanding of etiopatogenesis; c) explanation of the role of pharmacs; d) importance of changes in lifestyle; e) stressing relapse prevention and early intervention; f) explanation of psychological approaches; g) gender-specific informations; and h) informations for family and caregivers. During the study patients were asked to access the modules every two weeks. They were encouraged to discuss the content of module in discussion forum (Smith *et al.* 2011). In an exploratory trial authors found that Beating Bipolar was relatively easy to learning and had a modest effect on quality of life (Smith *et al.* 2011). Program had impact upon insight into the bipolar disorder, to the personal routines and increased positive attitudes towards medication (Poole *et al.* 2012).

CONCLUSIONS

Although no evidence of a definitive cause of bipolar disorder is yet available, it can be reasonably under control using pharmacotherapy and psychosocial interventions. Relapse rates (measured by number of hospital readmissions or days in hospital) decrease significantly when patients adhere to specific pharmacological regimens and are exposed, together with their relatives, to psychoeducational programs. Behavioral interventions (e.g., cognitive behavior therapy, caregiver support, psychoeducation regarding the early warning signs of mood relapse) are considered to be the first-line adjuncts to pharmacotherapy when trying to improve social function and reduce the need for medications, number of hospitalizations, and relapse rates. Beneficial effects of group, systematic care, family, CBT, interpersonal and social rhythm therapy can be observed for at least 1 year after their termination.

Despite certain success of all these psychotherapeutic and psychoeducational approaches, there could be some room for improvement. Greater attention to the future and personal values can improve the efficiency (Prasko *et al.* 2012).

Patients with bipolar disorder benefit from regular patterns of daily activities including work, rest, sleep, food intake, physical activity, and social or emotional stimulation. The patient should attend his psychiatrist. Family should try to establish regularity in these activities and strive to eliminate any excesses. The most important of the mentioned is ensuring that the patient will keep regular sleep patterns.

These conclusions should be tempered due to the substantial differences among studies in inclusion criteria, targeted outcomes, control groups, therapist training and monitoring procedures, or durations of treatment and follow-up. Most of the studies are single-site with inadequate sample sizes to test hypotheses about moderating and mediating variables. Thus, inferences regarding the effectiveness of specific models of psychotherapy for bipolar disorder are best viewed as promising but preliminary.

ACKNOWLEDGEMENTS

Supported by the project IGA MZ CR NT 11047-2010/4.

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