

Self-Report, Young Adult Self-Report and Teacher's Report Form) and Kiddie-SADS-Lifetime Version (K-SADS-PL) were used to assess 132 13–23-year-old-offspring of bipolar parents.

**Results:** Rating scale scores for bipolar offspring showed few differences with problem scores for normative adolescents. Forty-nine percent of the sample had a lifetime psychiatric disorder, most commonly (33%) a mood disorder.

**Conclusions:** The overall level of psychopathology of bipolar offspring was not highly elevated compared to that found for the general population. However, whenever bipolar offspring were more deviant, it was especially in the domain of mood disorders that they showed problems.

**Acknowledgements:** This study was financially supported by NWO (Dutch Organization for Scientific Research) and by the Stanley Medical Research Institute.

**Key words:** adolescents, bipolar disorder, psychopathology

59

### Effects of family psychoeducation on relatives of bipolar patients

M. Reinares\*, E. Vieta, F. Colom, A. Martínez-Arán, C. Torrent, M. Comes, A. Benabarre, J. M. Goikolea and J. Sánchez-Moreno  
*Bipolar Disorders Program, Hospital Clínic de Barcelona, Stanley Foundation Research Center, Spain*

**Background:** Several studies support that family intervention as adjunctive therapy to pharmacological treatment may improve the outcome of bipolar patients and the family functioning. Some findings show that family beliefs about the illness might predict family burden, and this burden could condition the outcome of bipolar disorder.

**Methods:** Relatives of 45 bipolar outpatients were divided into an experimental ( $n = 30$ ) and a control group ( $n = 15$ ). Patients were in remission for at least 3 months. All the patients received standard pharmacotherapy. Relatives of the experimental group received 12 psychoeducational 90 min-sessions about bipolar disorder. The bipolar disorder knowledge, the relationship subscales of the Family Environment Scale (FES), and the family burden subscales of the Social Behaviour Assessment Scale (SBAS) were assessed for both groups before and after the intervention.

**Results:** After the intervention, relatives of experimental group significantly improved in bipolar disorder knowledge, and reduced both the subjective family burden and their view on the role of the patient in the objective family burden. There were no statistical differences neither in the objective burden nor in the family environment subscales.

**Conclusions:** Family psychoeducation improves bipolar disorder knowledge, reduces the stress of the relatives and decreases their view on the role of the patient in the objective family burden.

**Acknowledgements:** This work was supported in part by the Theodore and Vada Stanley Research Foundation (Bethesda, USA) and by a grant from the Fondo de Investigaciones Sanitarias (FIS 01/1489).

60

### Do personality disorders contribute to a 'false positive' diagnosis bipolar disorder?

M. L. Rosso<sup>1,\*</sup>, E. J. Regeer<sup>1</sup>, M. ten Have<sup>2</sup>, W. Vollebergh<sup>2</sup>, A. Forsthoef<sup>3</sup> and W. A. Nolen<sup>1,3</sup>

<sup>1</sup>*Altrecht Institute for Mental Health Care, Utrecht, <sup>2</sup>Trimbos Institute, Utrecht, <sup>3</sup>University Medical Center Utrecht, Utrecht, The Netherlands*

**Purpose of the study:** According to the Dutch epidemiological population study into the prevalence of mental disorders in the general population (NEMESIS) (1) in which the CIDI was used, 2.4% of the population suffers from a bipolar disorder. Recently a

reappraisal study using DMS-IV criteria found that of the 80 persons diagnosed with a bipolar disorder based on the CIDI, only 33 were diagnosed as such based on the SCID. The high false positive rate when using the CIDI may be explained by personality disorders interfering with the Axis I disorders. Personality characteristics of the group of false positives (subjects diagnosed as bipolar with the CIDI and not with the SCID) will be compared to personality characteristics of the subjects diagnosed with a bipolar disorder using both CIDI and SCID and SCID alone.

**Methods:** All patients who participated in the study also completed the self-report Personality Disorders Questionnaire for DSM-IV (PDQ-4+).

**Results:** Results are currently being analysed.

**Acknowledgements:** This study was supported by an unrestricted grant from Eli Lilly.

**Key words:** bipolar disorder, personality disorders

### Reference

1. Ten Have M, Vollebergh W, Bijl R, Nolen WA. Bipolar disorder in the general population. Prevalence, consequences and care utilization. Results from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). *J Affective Disorders* 2002; 68: 203–213.

61

### Quetiapine versus placebo as adjunct to mood stabilizer for the treatment of acute mania

G. Sachs<sup>1,\*</sup>, J. A. Mullen<sup>2</sup>, N. A. Devine<sup>2</sup> and D. E. Switzer<sup>2</sup>  
<sup>1</sup>*Harvard Bipolar Research Program, Boston, MA, USA,*  
<sup>2</sup>*AstraZeneca, Wilmington, DE, USA*

**Objective:** To evaluate the efficacy, tolerability and safety of quetiapine as adjunct therapy to lithium (Li) or divalproex (DVP) in the treatment of acute mania in patients with bipolar disorder.

**Methods:** Adult inpatients meeting DSM IV criteria for Bipolar I Disorder, manic episode, were randomly assigned to 21 days of treatment with a mood stabilizer and placebo (PBO/MS) or quetiapine (QTP/MS) under double blind conditions. Prior to randomization, the study clinician assigned all patients to treatment with Li or DVP and tapered nonstudy medications. Mood stabilizer was titrated to therapeutic levels (Li 0.7–1.0 mEq/L; DVP 50–100 µg/mL), and dosing guidelines instructed clinicians to titrate study drug to maximize efficacy and tolerability within the range of 200–800 mg. Psychiatric assessments and vital sign measurements were performed at baseline and days 4, 7, 10, 14, and 21. The *a priori* primary outcome measure was change in Young Mania Rating Scale (YMRS) score from baseline to final assessment (LOCF); results were analyzed using ANCOVA. Additional assessments included CGI-BP, MADRS, PANSS, and GAS scores. Safety and tolerability assessments included adverse events, the modified Simpson-Angus Scale, and the Barnes Akathisia Rating Scale.

**Results:** 56 of 90 patients (62.2%) receiving QTP/MS completed the study, while 49 of 100 (49.0%) patients receiving PBO/MS completed. The mean of the median quetiapine dose during the last week of treatment was 500 mg. QTP/MS treated patients had a significantly greater change in YMRS compared to PBO/MS (LS Mean changes of –13.76 and –9.93, respectively;  $P = 0.021$ ). Significantly more quetiapine-treated patients achieved a 50% reduction in YMRS scores (QTP/MS, 54.3%; PBO/MS, 32.6%;  $P = 0.005$ ). Change in CGI-BP severity score was significantly greater for the quetiapine group (LS Mean changes of –1.38 and –0.78, respectively;  $P = 0.001$ ). The most common adverse events noted in QTP/MS patients (<sup>3</sup>10% and twice the rate of PBO/MS) were somnolence, dry mouth, asthenia, and orthostatic hypotension. Discontinuation due to adverse events was similar (QTP/MS, 5.6%; PBO/MS, 6.0%).

**Conclusions:** These results demonstrate the superior efficacy of quetiapine over placebo as adjuncts to treatment with mood stabilizers for acute mania. Quetiapine was safe and well tolerated.

## Abstracts

This is the first double-blind placebo-controlled trial to examine the efficacy, tolerability, and safety of quetiapine as adjunct treatment in adults with acute mania.

**Acknowledgements:** This study was funded by AstraZeneca.

**Key words:** antipsychotics, bipolar disorder, mood stabilizers

62

### Neuropsychological performance in depressed and euthymic bipolar patients

J. Sánchez-Moreno\*, A. Martínez-Arán, E. Vieta, F. Colom, M. Reinares, A. Benabarre, C. Torrent, M. Comes and M. Salamero  
*Bipolar Disorders Program, Hospital Clinic i Provincial de Barcelona, Stanley Foundation Research Center, Spain*

**Introduction:** Recent studies have suggested the presence of enduring cognitive dysfunctions in bipolar patients even in remission states. Most studies dealing with cognitive disturbances in affective disorders have focused on alterations during depressive episodes, often without differentiating unipolar and bipolar patients. Other methodological pitfalls are unclear remission criteria and small sample size.

**Methods:** Several domains of cognitive function were examined in 30 depressed bipolar patients (DSM-IV criteria for major depression, HDRS  $\geq 17$ ) and 30 euthymic bipolar patients (at least 6 months of remission, HDRS  $\leq 8$  and YMRS  $\leq 6$ ).

**Results:** The two groups showed a similar pattern of neuropsychological performance. However, the depressed group was significantly more impaired on verbal fluency tasks compared to the euthymic group.

**Conclusions:** Neuropsychological impairment in bipolar patients may be enduring, even between episodes. Further research including longitudinal designs will be required to evaluate changes on cognition in these patients.

**Acknowledgements:** This study was supported by a grant from the Stanley Research Foundation, Bethesda, MD, USA.

63

### sICAM-1 and depressive symptoms during interferon- $\alpha$ treatment

M. Schaefer<sup>1,\*</sup>, M. Horn<sup>2</sup>, F. Schmidt<sup>2</sup>, M. Schmid-Wendtner<sup>3</sup>, M. Ackenheil<sup>2</sup>, M. Volkenandt<sup>3</sup> and M. Schwarz<sup>2</sup>

<sup>1</sup>Department of Psychiatry, Charité, Humboldt-University, Schumannstr. 20/21, D-10117 Berlin, <sup>2</sup>Department of Psychiatry, Ludwig-Maximilians-University, Nußbaumstr. 7, D-80336 Munich, <sup>3</sup>Department of Dermatology, Ludwig-Maximilians-University, D-80337 Munich, Germany

Interferon- $\alpha$  (IFN- $\alpha$ ) treatment is frequently associated with psychiatric side-effects, such as depression with suicidal thoughts, irritability and manic episodes. Thus, IFN- $\alpha$  induced psychiatric side-effects can be used as a clinical model for studying immunological changes during IFN- $\alpha$  induced mood changes. However, mechanisms by which peripheral administered IFN- $\alpha$  modulates central nervous system remain unknown. Cell adhesion molecules as ICAM-1 are possibly involved in an increased permeability of the blood brain barrier (BBB) and known as useful markers for the activity of immune response in animal models of MS. Recently ICAM-1 expression on cerebral endothelial cells has also been associated to late life depression. Therefore we hypothesized, that soluble ICAM-1 is induced by IFN- $\alpha$  treatment, may affect the BBB and is possibly associated with IFN- $\alpha$  induced depression. In a prospective study, serum levels of soluble ICAM-1 and depressive symptoms were measured using the Zung self-rating scale (SDS) in patients with malignant melanoma during adjuvant IFN- $\alpha$  treatment. Scores for SDS and the serum levels of sICAM-1 increased highly significant between baseline and the third month of

treatment ( $p < 0.001$ ). The increase of sICAM-1 was positively correlated to SDS-values after three treatment months. Our data indicate a correlation between IFN- $\alpha$  induced depression and serum sICAM-1 levels and support the hypothesis of a causal relationship between sICAM-1 levels and depressive symptoms, possibly by modulating the BBB permeability. This model could help to understand dynamic immunological processes during (bipolar) affective disorders.

64

### Introduction of an electronic life-chart for bipolar patients

L. O. Schärer<sup>1,\*</sup>, V. Hartweg<sup>1</sup>, M. Graf<sup>1</sup>, G. Valerius<sup>1</sup>, M. Hoern<sup>1</sup>, C. Biedermann<sup>1</sup>, S. Walser<sup>1</sup>, A. Boensch<sup>1</sup>, S. Dittmann<sup>2</sup>, A. Forsthoft<sup>2</sup>, B. Hummel<sup>2</sup>, H. Grunze<sup>2</sup> and J. Walden<sup>2</sup>

<sup>1</sup>Christophsbad Hospital Goettingen, <sup>2</sup>Department of Psychiatry of the Universities Freiburg and Munich, Germany

**Introduction:** A combination of different drugs is more the rule than the exception in the treatment of bipolar disorder. As scientific data on combination therapy is sparse, drugs are chosen symptom-orientated and intuitive. Due to longitudinal intrasubject variability of symptoms, it can be very difficult to make clinical decisions about the success of individual drug for a patient. The NIMH Life-Chart Method (LCM), a sophisticated long-term monitoring method can be extremely helpful in this situation. However, due to the efforts needed to obtain continuous graphical summaries, which become necessary after some months, the LCM is restricted to special projects. Automation of data-entry and graphical processing can make this method available for every days clinical use.

**Methods:** The NIMH Life-Chart Method (LCM) was adopted for a common palmtop computer (Palmpilot M100). Fifty Patients that have demonstrated their understanding of the LCM for at least 2 month are now using the electronic Palm Life-Charts (PLC). Like with the paper based LCM, Mood, Impairment of Function, Drugs, Side-Effects, Life-Events, etc. are recorded each day. Using a modified modem a single button action synchronizes the PLC with a server, which automatically sends a printed life-chart to the patient. PLC is evaluated versus LCM.

**Results:** Feedback from patients is mostly positive. On average learning the method is perceived as easy – even without computer experience. Average time consumption is 1–2 min/day. Patient satisfaction is high. Total cost of ownership is very much lower than for the LCM.

**Conclusion:** This feasibility study shows that the electronic PLC is a viable alternative to the paper based LCM.

**Acknowledgements:** We gratefully acknowledge the support of the German Society for Bipolar Disorder (DGBS e.V) and the Theodore and Vada Stanley Foundation.

**Key words:** bipolar, life-chart, palm

65

### Serum cytokines and soluble ICAM-1 during depressive and manic episodes in patients with bipolar disorders

M. Schaefer<sup>1</sup>, R. Neumer<sup>1</sup>, F. Schmidt<sup>2,\*</sup>, A. Forsthoft<sup>2</sup>, B. Amann<sup>2</sup>, B. Hummel<sup>2</sup>, H. Grunze<sup>2</sup>, M. Ackenheil<sup>2</sup> and M. Schwarz<sup>2</sup>

<sup>1</sup>Department of Psychiatry, Charité, Humboldt-University, Berlin,

<sup>2</sup>Department of Psychiatry, Ludwig-Maximilians-University, Munich, Germany

Over the past decade immunological changes are frequently reported in animal models of depression or patients with affective or psychotic disorders. Proinflammatory cytokines might directly or indirectly trigger immune response and some cytokines such as