**Results:** Among HUNT attenders 13% of those with depression and 25% with anxiety disorders had been help-seekers. Help-seeking was only non-significantly associated with demographic or other variables.

**Conclusion:** Most persons with anxiety disorder and/or depression in the population had not sought help for their mental disorders, but the disparity between use and need of health service must not be overassessed. Improvement of the help-seeking rate for common mental disorder should have high priority in mental health politics.

## O-04-10

Hypericum possibility in Lithuania

B. Burba, A. Gendrolis, O. Jankuviene. *Kaunas Medical University Psychiatry, Kaunas, Lithuania*

**Objective:** Depression treatment cost took fourth place in 1990 and it is expected to be in the second by 2020. Additional treatment modalities with little risk, credible benefit, and moderate cost could be a useful addition to depression management in primary care settings. This study aims to ascertain the experience and view of Lithuania psychiatrits in relation to St John's Wort (Hypericum)as alternative treatment.

**Methods:** A questionnaire about alternative treatment generally and the benefits and risk to use St John's Wort for treatment of depression was posted to 238 Lithuania psychiatrist.

**Results:** 80% of respondents were sceptical, 16% respondents' point of view was neutral and only 4% of psychiatrists attitudes about Hypericum and alternative treatments were positive.

**Conclusion:** Regarding literature Hypericum reduces about 68% depressive symptoms of mild or moderate depression after 6 weeks treatment, for 51% of females with premenstrual syndrome (PMS) using hypericum extract every day reduces PMS symptoms, 92% reduces wish to cry, 85% mood get better and 71% reduces stress. There are created technologies for Hypericum tincture, Hypericum liquid extract, Hypericum oily extract, Hypericum tea, honey with Hypericum extract preparation for PMS in Drugs technology and Pharmacy organization department, Kaunas Medical University, Lithuania. However practitioners are sceptically set on Hypericum preparations and prescribe them quite rarely in Lithuania yet.

**Sunday, April 3, 2005**

# P-03. Poster session: Affective disorders I

*Chairperson(s):* Patrice Boyer (Ottawa, Canada), K.N. Fountoulakis (Aretsou, Greece)
11.15 - 12.15, Gasteig - Foyers

## P-03-01

Lithium blood level and polarity of recurrence in bipolar disorder

E. Severus, N. Kleindienst, W. Greil, H.-J. Möller. *LMU Munich Psychiatry, Munich, Germany*

**Objective:** Recently published data on prophylactic lithium might indicate that prophylactic lithium is effective in preventing depression at low doses whereas higher doses might be needed to prevent manic or mixed states. To systematically test this hypothesis several sources of evidence were exploited.

**Methods:** We present data from two different types of analyses. First, a systematic review was carried out to test whether depressive recurrences might be more likely to occur in studies with high lithium levels. Second, we carried out more detailed analyses of studies that allowed to relate blood levels to the pole of recurrence (depressed vs. manic or mixed) on an individual basis.

**Results:** The major result from the systematic review is that the percentage of depressive recurrences (with regard to the total number of recurrences) was significantly higher in studies with a higher range of lithium serum levels. Detailed data from recent large RCTs using lithium as a control treatment are not fully available yet. However, preliminary results do confirm the findings of the systematic review.

**Conclusion:** If further analyses corroborate the hypothesis that low lithium levels are effective to prevent depressive episodes whereas higher levels are needed to prevent manic or mixed episodes, a more individually adopted prophylaxis with lithium - according to the prior course of the illness – will possibly be feasible in the future.

## P-03-02

Are low lithium levels needed to prevent bipolar depression and high lithium levels to prevent mania?

N. Kleindienst, E. Severus, H.-J. Möller, W. Greil. *University of Munich Department of Psychiatry, Munich, Germany*

**Objective:** A more differentiated use of mood-stabilizers presupposes more detailed knowledge about their spectrum of efficacy. Some recently published data might suggest that prophylactic lithium is effective in preventing depression at lower doses whereas higher doses might be needed to prevent manic episodes. To thoroughly test this hypothesis several sources of evidence were evaluated.

**Methods:** Data presented in this poster originate from a RCT with a prospective maintenance period of 2.5 years (MAP- study) including 86 bipolar patients (DSM-IV) on lithium monotherapy with regular assessment of both lithium levels and psychopathology. The last lithium level during the euthymic interval was used to predict polarity of the first reappearance of significant symptomatology (depressive vs. manic or mixed).

**Results:** Depressive recurrences were preceded by significantly lower lithium serum levels than manic recurrences. Detailed analyses implying multivariate analyses with potential confounders fully corroborate this finding. Patients without significant worsening of symptoms had an intermediate serum level (i.e. higher than patients who had to be treated for reappearance of manic or mixed symptoms but lower than patients with reappearance of depressed symptoms).

**Conclusion:** The results confirm the hypothesis that higher lithium levels are rather related to depressive (not manic or mixed) polarity of recurrence. If substantiated by further analyses that are underway this finding would help to better adjust an individually optimal lithium level. Currently, detailed re-analyses of data are carried out in collaboration with research groups who carried out RCTs implying a lithium group and a systematic review of published lithium studies is in preparation.

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## P-03-03

Efficacy and safety of Ziprasidone in bipolar disorder: Long-term data

M. Versiani, P. Keck, S. Potkin, G. Ellenor, E. Batzar. *Inst. of Psychiatry, Federal University Riode Janeiro, Rio de Janeiro, Brazil*

**Objective:** To evaluate the efficacy and tolerability of long-term ziprasidone treatment in subjects with bipolar I disorder who had undergone an earlier short-term trial for acute mania.

**Methods:** This was a 52-week, open-label extension of a 21-day placebo-controlled trial of ziprasidone 40-160 mg/d in inpatients with acute bipolar mania. Efficacy assessments included Mania Rating Scale (MRS), Clinical Global Impression of Severity (CGI–S), and Hamilton Depression Rating Scale (Ham–D-17). Efficacy results from extension study baseline through Week 52 were derived from subjects who had received ziprasidone in the acute study.

**Results:** All extension study subjects (N=127) received ziprasidone 40 mg BID on Day 1, after which dosages were adjusted by 40 mg/d in a range of 40-160 mg/d. Mean ziprasidone dosage from acute study baseline to 52-week endpoint was 122.4 mg/d. Sustained improvements in MRS and CGI–S scores were seen throughout the extension study, with statistical significance versus baseline noted at each study visit. Ziprasidone was well tolerated in the safety-evaluable subjects; 11 (8.7%) subjects discontinued therapy because of treatment-related adverse events. There was no clinically relevant change in mean serum cholesterol at endpoint, whereas a ric decrease was observed in mean triglyceride levels. Weight loss at endpoint was modest.

**Conclusion:** In this 52-week extension study, ziprasidone was associated with long-term global symptom improvement in subjects with bipolar I mania. Ziprasidone was well tolerated, and was associated with a weight- and lipid-neutral profile.

## P-03-04

Ziprasidone in bipolar mania: Efficacy across patient subgroups

A. Weizman, P. Keck, S. Potkin, L. Warrington, F. Mandel. *Geha Psychiatric Hospital Research Unit, Petah Tiqva, Israel*

**Objective:** To evaluate the efficacy and tolerability of ziprasidone in acute bipolar mania, focusing on clinically relevant subgroups.

**Methods:** This was a pooled analysis of two randomized, double-blind 21-day trials comparing flexible-dose ziprasidone (40–80 mg BID) to placebo in adults with mania associated with bipolar I disorder. Changes in Mania Rating Scale (MRS) score and Clinical Global Impression of Severity (CGI–S) were calculated for combined study populations and in subgroups of subjects with manic episodes or mixed episodes, and with or without psychotic symptoms.

**Results:** At last visit (LOCF), mean change in MRS in subjects receiving ziprasidone (n=268) was –11.72 (baseline 26.82) vs –6.69 (baseline 26.53) in subjects receiving placebo (n=131) (P<0.001). Change in CGI–S for ziprasidone was –1.19 (baseline 4.71) vs –0.66 (baseline 4.76) for placebo (P<0.001). Significant improvement vs placebo was observed from Day 2 for MRS and Day 4 for CGI–S. MRS and CGI–S changes were comparably robust whether the subject's manic episode was classified as acute or mixed, or was complicated by psychotic symptoms or not. Overall, ziprasidone subjects had a response rate of 48% and a remission rate of 40% (both P<0.01 vs placebo).

**Conclusion:** Ziprasidone rapidly improves symptoms and global illness severity in bipolar mania. It is comparably efficacious in mixed and manic episodes and in the presence or absence of psychotic symptoms, and is well tolerated.

## P-03-05

Efficacy and tolerability of ziprasidone in acute bipolar mania: 12-week, double-blind study

J. Dunn, T. Ramey, E. Giller, P. English, R. Riesenberg, J. Trivedi, V. Tochilov. *Pfizer Inc., New York, USA*

**Objective:** To establish superior efficacy of ziprasidone vs placebo in treatment of bipolar mania at 3 weeks and to evaluate maintenance of effect for ziprasidone and haloperidol at 12 weeks.

**Methods:** 438 bipolar subjects with current episode manic or mixed were randomized to double-blind treatment with flexibly-dosed ziprasidone (40–80 mg BID), haloperidol (4–15 mg BID), or placebo. At end of Week 3, placebo subjects were reassigned to ziprasidone until endpoint and were analyzed for safety only. Subjects randomized to ziprasidone or haloperidol continued to receive assigned treatment for ≤12 weeks. Primary efficacy measure was mean change from baseline to Week 3 in MRS Total score for ziprasidone vs placebo. Maintenance of effect was determined by percent of Week 3 responders (ziprasidone vs haloperidol subjects with >/=50% decrease in MRS) who remained responders at Week 12.

**Results:** Ziprasidone was superior to placebo at Week 3 (P<0.001) in both LOCF and OC analyses of mean MRS change from baseline, with significance noted as early as Day 2. Improvement in MRS was maintained for ziprasidone: 92.5% of Week 3 responders were still in response at Week 12. Ziprasidone was associated with lower rates of EPS at Week 3 than haloperidol, and overall lower rates of AEs.

**Conclusion:** Ziprasidone was efficacious in the treatment of subjects with bipolar mania; this effect was maintained throughout the study. Ziprasidone was safe and well tolerated, with lower rates of AEs and EPS than haloperidol.

## P-03-06

Glutamate and glycine in bipolar mania

W. Verhoeven, R. Hoekstra, D. Fekkes, A. Loonen, L. Pepplinkhuizen. *Vincent van Gogh Institute for Psychiatry, Venray, Netherlands*

**Objective:** Over the past decade increasing evidence has emerged about the involvement of glutamatergic dysfunctionality in schizophrenia. Since glycine is a co-agonist at the NMDA receptor, levels of this amino acid have been measured and treatment studies have been performed. The results suggest a therapeutic effect of glycine on the symptom profile of psychotic disorders.

**Methods:** In the present study, the large neutral amino acids as well as glutamate and glycine were measured in 20 bipolar patients during the manic phase and after remission. Plasma levels of amino acids were compared to those in a stable nonsymptomatic group of manic patients (n=13) and matched controls (n=34). All patients were on maintenance treatment with lithium and/or mood stabilizing anticonvulsants. Severity of manic symptomatology was assessed with the Young Mania Rating Scale.

**Results:** During the manic episode a significant increase of glutamate and glycine were found that persisted at remission. In addition, a decrease of tryptophan and the tryptophan/LNAA ratio were found. Subsequent analysis showed that the changes in glutamate, tryptophan and its ratio were related to the use of anticonvulsants. The increased glycine could not be explained by an effect of psychotropic medication, which indicates a relationship of this parameter with the actual psychopathology.

**Conclusion:** The results indicate that, like in schizophrenia, NMDA receptor dysfunction, here reflected by an increased glycine level, may be involved in the relapse of bipolar mania.

## P-03-07

A systematic review of MRI brain volumes in bipolar disorder: A comparison with healthy controls and patients with schizophrenia

A. McIntosh, D. Gerber, K. Ullyat, J. Cavanagh, S. Lawrie. *University of Edinburgh Division of Psychiatry, Edinburgh, United Kingdom*

**Objective:** The primary aim of this systematic review was to examine the evidence that the brains of people with bipolar disorder are different in structure from those of healthy controls and to describe and quantify any differences found. In addition, studies comparing patients with bipolar disorder and schizophrenia were also reviewed in order to assess the diagnostic specificity of any structural MRI findings.

**Methods:** Primary studies were considered for inclusion if they were published between 1984 and 2003 as an article and compared patients with operationally defined bipolar disorder with a group of unrelated healthy controls or subjects with schizophrenia. We searched Medline, PsychINFO and Embase and performed a cited reference search. Studies were combined using random effects meta-analysis.

**Results:** Statistically significant evidence of an increase in volume in bipolar compared to controls was found for the following structures: right amygdala, total globus pallidus, total striatum, left thalamus and lateral ventricles. Left anterior STG and pituitary volumes were reduced in volume compared to controls. Evidence was also found for larger total temporal lobe, total hippocampus, left and right entorhinal cortex, total and right amygdala, left total STG, and left posterior STG in bipolar disordered patients compared to those with schizophrenia. Bipolar patients showed significant reductions in right prefrontal cortex compared to patients with schizophrenia.

**Conclusion:** The comparison of bipolar and schizophrenic patients has much to tell us about the biology of both disorders and their component symptoms. Unfortunately, until studies with at least modest sample sizes are conducted, it is likely that sMRI research in bipolar disorder will trail that of schizophrenia by several years.

## P-03-08

The in vivo effect of lithium on gray matter volume and relation to clinical outcome in bipolar I patients- preliminary results of an MRI study

A. Forsthoff, E. Meisenzahl, H. Grunze. *Ludwig Maximilians University Psychiatry, Muenchen, Germany*

**Objective:** There is preliminary evidence for Lithium's neuroprotective effects and induction of neurogenesis (Moore et al.,2000;Brambilla et al.,2001;Sassi et al.,2002). Due to several methodological limitations, however, it is still unclear whether this also holds true in larger and better controlled samples and especially whether it relates to clinical effectiveness in treating bipolar disorder.

**Methods:** This study investigated 20 bipolar I patients with lithium treatment for more than 5 years, taking retrospectively into account if they responded to the treatment, compared to 20 bipolar patients with other long term treatment such as valproate, lamotrigine or atypical neuroleptics and 40 healthy controls. These patients were matched for age, gender, illness characteristics, comorbidities and were euthymic. MRI images were obtained (1.5 Tesla Magnetom Vision, Siemens) using a coronar T2- and protondensity-weighted Dual-Echo-Sequence. Specific tissue volume measurements were be obtained by using the segmentation software program BRAINS. Volume changes of the total gray matter and of limbic key structures were compared between the groups.

**Results:** Preliminary data will be presented.The hypothesis to be tested is that there is no statistical significant difference of gray matter and limbic volume in patients with lithium compared to controls, but a significant volume reduction in patients without lithium. Within the lithium group, it is hypothized that a better outcome is related to less volume reduction.

**Conclusion:** If this hypothesis proves to be true, this study may supply further insights into a possibly unique property of lithium and its relation to illness variables and outcome.

## P-03-17

MRI findings in Bipolar I patients: Preliminary data

K. N. Fountoulakis, *Aristotle Univ. Thessaloniki, Greece*

## P-03-09

Effect of comorbidity and number of past episodes on outcome of the patients with bipolar disorders-report of a cohort of patients aged 65 years and above

F. Galland, E. Vaille-Perret, A. Mulliez, L. Gerbaud, I. Jalenques, *CMPA, CHU de Clermont-Ferrand, Clermont-Ferrand, France*

**Objective:** To estimate the outcome after 4 years of bipolar patients aged 65 or more hospitalized in 2000 in psychiatry, and determine which characteristics influence the outcome of the bipolar disease in terms of mortality and risk of recurrences.

**Methods:** The characteristics of 20 bipolar patients aged 65 or above were compared with those of 31 recurring depressive patients and 10 simple depressive patients. The diagnostic criteria are those of the DSM-IV.

**Results:** The vascular risk factors (including diabetes mellitus) are significantly more present in the bipolar patient. They deteriorate the prognosis in terms of survival (38% of the bipolar patients die from a cardio-vascular ischemic cause, no patient in other groups). The bipolar patients present a significantly higher number of recurrences. There is a positive and significant correlation between the number of previous recurrences and the risk of future new recurrences both in bipolar patients and recurring depressive patients. Other parameters of poor outcome were determined: physical handicap and medical comorbidity are associated with a greater risk of death; young age of onset of the disease, a number of inhospital admissions above 5, residual

symptomatology, previous attempt of suicide, diabetes mellitus and a death in the lineage are associated with a risk of new recurrences.

**Conclusion:** Cardio-vascular risk factors and an important number of recurrences influence negatively the future of the old bipolar patients.

## P-03-10

Mixed depression

F. Benazzi. *Cervia, Italy*

**Objective:** Testing different definitions of mixed depression.

**Methods:** Consecutive 245 bipolar-II (BP-II) and 189 major depressive disorder (MDD) outpatients interviewed (off psychoactive drugs) with the Structured Clinical Interview for DSM-IV, the Hypomania Interview Guide, the Family History Screen, by a senior psychiatrist when presenting for major depressive episode (MDE) treatment in a private practice. Mixed depression was defined as an MDE plus concurrent hypomanic symptoms. Multivariate analyses were used. Bipolar disorders family history (BP-FH) was used as the validator.

**Results:** BP-II, versus MDD, had significantly more intra-MDE hypomanic symptoms (racing/crowded thoughts, irritable mood, psychomotor agitation, more talkativeness). MDE plus >2 hypomanic symptoms was present in 68.7% BP-II, and 42.3% MDD. A "motor activation" factor (including psychomotor agitation and more talkativeness) and a "mental activation" factor (including racing/crowded thoughts, irritability, distractibility) were found among the intra-MDE hypomanic symptoms. The definitions of mixed depression tested versus BP-FH were MDE plus >1,2,3,4 hypomanic symptoms, MDE plus psychomotor agitation, MDE plus racing thoughts. The most balanced combination of sensitivity and specificity (around 65%), the highest ROC area (0.83), was shown by MDE plus >2 hypomanic symptoms. Multiple logistic regression of BP-FH versus all mixed depression definitions found that MDE plus >2 hypomanic symptoms was the only independent predictor. A dose-response relationship was found between number of intra-MDE hypomanic symptoms and BP-FH loading.

**Conclusion:** MDE plus >2 hypomanic symptoms was the most supported definition of mixed depression. Mixed depression may impact treatment (antidepressants could increase hypomanic symptoms, mood stabilisers/antipsychotics could control hypomanic symptoms during antidepressants).

## P-03-11

How representative are patients in drug trials on mania?

R. W. Licht. *Aarhus Psychiatric Hospital Mood Disorders Research Unit, Risskov, Denmark*

**Objective:** This study addressed the question of whether selection of patients for drug trials in mania may limit the applicability of results from the study population to a wider population.

**Methods:** The study was performed at the Aarhus University Psychiatric hospital, covering a well defined catchment area. Over a one-year period, all consecutively admitted patients aged 18 to 65 were screened for manic symptoms. Patients with a DSM-IV manic or mixed episode with or without psychotic symptoms in need of antimanic drug treatment were identified. Diagnosis was obtained by using the Present State Examination. All patients were rated with the Bech-Rafaelsen Mania Scale (MAS) and the Social Dysfunction and Aggression Scale (SDAS-9). Those of the patients not meeting specific exclusion criteria were allocated to a 4 weeks fixed dosed open trial with risperidone. Patients allocated to the drug trial and patients meeting at least one exclusion criterion were compared on the available variables using simple descriptive statistics.

**Results:** 42 patients (20 men and 22 women) with mean age (SD) of 43.4 (10.7) years fulfilled the inclusion criteria. Of these, 14 (33.3%) patients could be allocated to the risperidone trial. The distribution of MAS scores, the number of patients with psychotic symptoms, age and sex was similar in the group of excluded and the group of allocated patients. However, on the SDAS-9, the excluded patients scored averagely higher ($p < 0.05$).

**Conclusion:** Since the trial patients differed from the manic patients not being able to participate, in terms of aggressiveness, the generalisability of results from antimanic drug trials in general may be questioned.

## P-03-12

Evaluation of groups for relatives of patients with bipolar disorder in the Ludwig-Maximilian University, Munich, Germany: preliminary results

B. Bernhard. *Ludwig Maximilian University Psychiatry, München, Germany*

**Objective:** Although environmental stress has an important role in the course of bipolar disorder, there are just a few controlled studies focusing on family intervention. A very extensive study in Boulder (Miklowitz et al, 2000, 2003) showed the wide effects of family focussed treatment. The aim of our study was to assess the effect of psychoeducational groups on bipolar patients relatives, established in our clinic.

**Methods:** 49 relatives of bipolar patients received two four-hour workshops in psychoeducation. Relationship, burden, criticism, high expressed emotion and BDI (Beck depression inventory) of the caregivers were assessed before, after and one year after the intervention. Comparison of the data before, after and one year after the group was made using a paired t-test.

**Results:** The burden and high expressed emotion of psychoeducated caregivers is significantly reduced one year after but not directly after the intervention. The caregivers felt significantly better informed after the intervention and still in the one-year follow up.

**Conclusion:** The relatives felt significantly better informed and the burden as well as high expressed emotion was significantly reduced one year after the intervention.

## P-03-13

Evaluation of a cognitiv-psychoeducative group therapy with bipolar patients in the Ludwig-Maximilian University, Munich, Germany: preliminary results

B. Bernhard. *Ludwig Maximilian University Psychiatry, München, Germany*

**Objective:** Colom et al. (2003) showed in his study the effectiveness of a psychoeducative group intervention on bipolar patients. We established a cognitive-psychoeducative group intervention with 14 sessions of information, relapse prevention as well as cognitive and behavioural strategies of psychotherapy and social rhythm therapy. The aim of this study was to assess the effects of our intervention in bipolar patients.

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**Methods:** 62 medicated bipolar patients received 14 90-min sessions of our cognitive-psychoeducative group therapy. The patients knowledge of bipolar disorder was assessed before and after the intervention. Additionally the patients rated a feedback questionnaire after the intervention. Comparison of the data before and after the group was made using a paired t-test.

**Results:** The psychoeducated patients significantly improved their knowledge of bipolar disorder and treatment possibilities. In the feedback questionnaire, they all rated the group as informative and helpful. They also benefited from the discussions in the group and the exchange of useful strategies. They highly recommend the group to other patients.

**Conclusion:** These preliminary results suggest that psychoeducational interventions on bipolar patients may improve the patients knowledge of the illness. The participants value the intervention as highly informative and helpful.

## P-03-14

Bipolar disorder and quality of life

M. Centeno, S. Arranz, A. Rodriguez, M. García, D. Gonyalons. *Hospital de Granollers Psychiatry, Granollers, Spain*

**Objective:** Bipolar disorder is a disease characterized by alternance of depression and mania or hipomania, usually exists a euthymic period between both episodes. Quality of life (QV) usually is defined as "capacity to work correctly, to enjoy a well-being sensation and to experience with satisfaction social, emotional, physical and intellectual the aspects of the life". Evaluation of patients' QV in different settings is considered at the moment as a nuclear aspect of the medical performance.

**Methods:** Patient diagnosed of bipolar disorder were selected from different clinical setting, obtaining socio-demographics and clinical data. The euthymic status of the patient was evaluated by the HDRS and the YMSR; and the quality of life was evaluated by SOFAS and QLS-R&B.

**Results:** The sample was composed by 90 patients. The averages of scales' scores were: YMRS 1, HDRS 2.5, SOFAS 78.3, and all scores from QLS-R&B were below the mean provided by the questionnaire authors. There was a negative correlation between the SOFAS and the YMRS (r = -0,259 and p=0, 01) and the HDRS (r = -0,408 and p=0, 05), and between number of episodes and the QLS-R&B social support (r = 0.276 and p=0, 05). There was a positive correlation between the QLS-R&B physical/ psychological wellbeing and the HDRS (r = 0.216 and p=0, 05).

**Conclusion:** Patients diagnosed of bipolar disorder have lower quality of life than general population, with higher quality of life as lower number of episodes and lower scores in YMRS and HDRS; and without relation with socio-demographics information.

## P-03-16

Cerebral blood flow and neuropsychological assessment in a patient with Cotard's Syndrome

F. Van den Eynde, M. Portzky, F. Jacobs, S. De Saedeleer, K. Audenaert, C. van Heeringen. *University Hosipital Ghent, Gent, Belgium*

Objectives Cotard's syndrome is a rare monothematic delusion, characterized by nihilistic thoughts of being dead or having lost all organs. It occurs within a broad variety of psychiatric pathologies as a psychotic depressive episode and is predominately due to a right hemispheric brain dysfunction. We aimed, firstly, to investigate whether cerebral perfusion abnormalities could be shown in a patient with Cotard's syndrome and secondly to investigate neuropsychological performance of this patient. Methods A 46-year old female patient with a bipolar disorder type I was suffering from a severe case of Cotard's syndrome during a depressive episode. A Single Photon Emission Computed Tomography (99m Tc-Ethyl Cysteine Dimer, ECD) was performed during this depressed period and was repeated 6 weeks later during a hypomanic state. Data were analysed with Statistical Parametric Mapping. A broad neuropsychological test battery was performed by a trained neuropsychologist. Results The neuropsychological data strongly indicate a severe right hemisphere dysfunction in this patient with Cotard's syndrome (e.g. clock drawing test, Rey's complex figure). However, no cerebral regions showing a significantly altered perfusion could be detected in this patient, compared to healthy volunteers. Neither were significant differences in regional cerebral perfusion in the within-subject comparison detected. Conclusion Regardless the presence of severe neuropsychological right hemisphere abnormalities in a case of Cotard's syndrome, no abnormalities in cerebral perfusion patterns were shown. This is in accordance with the literature available on this topic and stress the importance of a neuropsychological evaluation in some patients.

**Monday, April 4, 2005**

# P-10. Poster session: Affective disorders III

*Chairperson(s):* Filip Rybakowski (Poznan, Poland), Verena Henkel (München, Germany)
18.00 - 19.30, Gasteig - Foyers

## P-10-01

In vivo Imaging of the serotonergic neurotransmitter system in an animal model

E. Meisenzahl, G. Schmitt, C. la Fougere, T. Zetzsche, T. Frodl, M. Keck, M. Müller, K. Hahn, H.-J. Möller, S. Dresel. *Psychiatrische Klinik der Ludw, München, Germany*

Serotonin is an essential neurotransmitter for the normal functioning of the CNS. The serotonergic system ist not only important physiologically but also affects other behaviors such as the sleep-awake cycle, modd, appetite, body temperature and depression. Depression has been shown to be associated with abnormal functioning of the serotonergic system. The dysregulation of the serotonergic transmission may be associated with a dysregulation of the serotonin transporter protein (SERT). It is still a matter of controversity if altered SERT density or function is involved. Additionally, the acute and long-term effects of psychopharmacological treatment with antidepressants on the 5HT system are largely unknown. The animal model is the most equivalent approach to analyze in vivo the SERT in depression and during pharmacological challenges. A small animal SPECT-device with ultra high resolution pinhole collimators is used to assess in vivo SERT density and functional changes. Additionally, post mortem analysis is performed. The in-vivo analysis of the CNS of Sprague-Dawley rats is performed by a SPECT protocol using I-123 ADAM. The investigation of the detailed biodistribution and specific binding will be presented.

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