

CT and discrete aneurysmatous dilatation of the aortic arch by heart ultrasonography. CSF findings did not satisfy laboratory criteria for the confirmation of diagnosis of active neurosyphilis. Late (tertiary) syphilis with beginning cardiovascular involvement was diagnosed and treatment with benzathin penicillin was administered. Six months later he was readmitted for a follow-up examination. Psychiatric symptoms were improved.

**Conclusion:** Although quite rare today, neurosyphilis should be considered in the differential diagnosis of patients with psychotic symptoms and positive syphilis serology, as the appropriate treatment depends on early and accurate diagnosis. Moreover, given the wide use of antibiotics, abortive cases of neurosyphilis with atypical presentation forms must also be considered. Finally, this case suggests that in addition to the appropriate antibiotics, treatment with antipsychotics seems to be effective in controlling psychiatric symptoms emerging in the course of late syphilis.

### P0128

A study of comparison of components of insight in patients with schizophrenia and bipolar affective disorder in remission phase

S. Govil, S.N. Sengupta, P. Sharma, D. Kumar. *Department of Psychiatry, Institute of Human Behaviour & Allied Sciences, Delhi, India*

A cross sectional study was conducted to examine the nature of insight in schizophrenia and bipolar disorder as well as compare it between the two disorders. Forty patients with schizophrenia and forty patients with bipolar disorder matched on age, age of onset of illness and duration of illness, were recruited consecutively from the outpatient clinic of a psychiatric hospital. The patients had to be clinically stable on follow-up treatment for at least three months. Insight was measured using Schedule for Assessment of Insight- Extended Version (SAI-E) and Scale of Unawareness of Mental Disorders (SUMD). Both schizophrenia and bipolar disorder had modest level of insight as measured on both the instruments. There was no qualitative difference in insight between the two disorders. However, patients with bipolar disorder had significantly better awareness of illness than patients with schizophrenia. This was evident on both the instruments that showed significant concordance on the items of insight for both the disorders.

### P0129

Working memory dysfunction as phenotypic marker of schizophrenic and bipolar affective psychoses: Common and differential abnormalities in brain activation

O. Gruber, I. Henseler, H. Scherk, T. Wobrock, P. Falkai. *Centre for Translational Research in Systems Neuroscience and Clinical Psychiatry, Department of Psychiatry and Psychotherapy, Georg August University, Goettingen, Germany*

**Background and Aims:** Working memory dysfunctions are considered to be promising intermediate phenotypes, i.e. biological markers, which may help to discover genetic and pathophysiological factors involved in the pathogenesis of schizophrenic and affective psychoses. However, little is known about the possible role of these brain dysfunctions for differential diagnosis, for instance between schizophrenia and bipolar affective disorder. In the present study we directly compared brain activation during verbal working memory task performance in matched groups of schizophrenic and bipolar patients as well as healthy controls.

**Methods:** 12 schizophrenic patients, 14 bipolar patients and 14 healthy controls underwent fMRI during a delayed matching to sample task requiring the maintenance of verbal information in working memory. Data were preprocessed and statistically analyzed using standard procedures as implemented in SPM2.

**Results:** Both schizophrenic and bipolar patients exhibited significantly increased activation in bilateral dorsolateral prefrontal cortex and in right intraparietal cortex. Abnormal hyperactivations that were unique to either schizophrenia or bipolar disorder were found in bilateral caudate nucleus and the right amygdala, respectively.

**Conclusions:** Compatible with findings from genetic research into the pathogenesis of schizophrenia and bipolar disorder, the present data show both similarities and significant differences between these two diagnostic categories regarding the patterns of abnormal brain activation that may underlie verbal working memory deficits in these patients.

### P0130

Grey matter correlates of skin conductance levels in patients with schizophrenia and healthy volunteers: A voxel-based morphometry (vbm) study

J.E. Hallak<sup>1</sup>, T.B. Ferrari<sup>1</sup>, J.A. Crippa<sup>1</sup>, D. Araujo Jr.<sup>2</sup>, A.C. Santos<sup>2</sup>, A.W. Zuardi<sup>1</sup>. <sup>1</sup>*Department of Neurology, Psychiatry and Psychological Medicine, Ribeirao Preto Medical School, University of Sao Paulo, Ribeirao Preto, Brazil* <sup>2</sup>*Department of Radiology, Ribeirao Preto Medical School, University of Sao Paulo, Ribeirao Preto, Brazil*

Electrodermal activity has been considered as a potential source to identify subgroups of schizophrenics. However, the neural mechanisms that are the base of the electrodermal responsiveness in schizophrenia are not well-known. The present study aimed to determine if schizophrenic patients with different skin conductance levels (SCL) show differences in grey matter (GM) volume estimated through VBM. Thirty-four schizophrenic patients paired with healthy volunteers, matched according to sex, age, handedness, socio-economic status and years of education, were selected. All patients were using anti-psychotics, and were included only when their score in the BPRS was lower than "present in mild degree" in all the scale items, except for negative symptoms. The electrodermal activity was measured during five minutes at rest and in comfortable conditions. Three groups were obtained, according to the electrodermal level: control, schizophrenic with normal SCL and schizophrenic with low SCL. MRI was performed with a Siemens Magnetom 1.5T imaging system. The optimized VBM protocol was implemented within MATLAB 7.0 (Mathworks Inc.) through Statistical Parametric Mapping 2. Compared to controls, schizophrenic patients presented abnormalities in regional GM volume in superior and medial frontal lobes, paracentral lobule, cingulate, transverse temporal, insula, precuneus and occipital lobe. Regarding the schizophrenia groups, it was observed that the low SCL group presented smaller regional GM density in the right superior frontal lobe and in the right anterior cingulate. Accordingly, these results suggest that these brain areas may be involved in the modulation of SCL in schizophrenia and could be altered in a subgroup of patients.

### P0131

Plasma concentrations of aminoacids in chronic non-refractory schizophrenia and their first-degree relatives compared to refractory schizophrenia and their first degree-relatives

J.E. Hallak<sup>1</sup>, M.T. Cunha<sup>2</sup>, R.A. Gomes<sup>2</sup>, A.W. Zuardi<sup>2</sup>, S.M. Dursun<sup>3</sup>. <sup>1</sup>Department of Neurology, Psychiatry and Psychological Medicine, Ribeirao Preto Medical School, University of Sao Paulo, Ribeirao Preto, Brazil <sup>2</sup>Uberaba Medical School, University of Uberaba, Minas Gerais, Uberaba, Brazil <sup>3</sup>Neuroscience and Psychiatry Unit, University of Manchester, Manchester, UK

Abnormalities of peripheral amino acid concentrations have been reported in schizophrenia since 1954 (Sackler, 1954), however results have been inconsistent and the neurobiological implications of these abnormalities remain unclear.

We measured serum levels of serine, glycine and glutamate in 14 chronic non-refractory patients with schizophrenia treated with traditional antipsychotics and in 12 first-degree relatives and compared the data to the serum levels from 12 refractory patients treated with clozapine and their first-degree relatives.

We found decreased serum levels of serine ( $p=0.048$ ) and glutamate ( $p<0.001$ ) in chronic non-refractory schizophrenia compared to refractory schizophrenia, but no differences in glycine levels.

Furthermore, the data demonstrated that first-degree relatives of non-refractory patients have increased serum levels of glycine ( $p=0.046$ ) and decreased levels of glutamate ( $p<0.001$ ), but no differences in serine serum levels compared to first degree-relatives of refractory patients

These data show that changes in serum amino acids may predominantly involved in central glutamatergic transmission in refractory schizophrenia. Also, it could be hypothesized that this differential pattern of serum aminoacids concentrations in first-degree relatives may be a biological marker and predictor involved in the response to antipsychotic treatments in schizophrenia patients.

### P0132

Childhood subclinical characteristics in schizophrenia - a questionnaire-based retrospective study

Y. Hamasaki<sup>1</sup>, T. Murai<sup>2</sup>. <sup>1</sup>Kyoto Women's University, Kyoto, Japan <sup>2</sup>Department of Psychiatry, Kyoto University, Kyoto, Japan

**Background and Aims:** Childhood subclinical characteristics have not been fully investigated in patients with schizophrenia. To elucidate the picture of them, and to find out indicators which predict later development of schizophrenia, childhood behaviors of the adult schizophrenia subjects were investigated in a questionnaire-based retrospective study.

**Population and Methods:** schizophrenia outpatients ( $n=50$ ) in his/her twenties and normal healthy subjects ( $n = 100$ ) were investigated. All patients are diagnosed according to DSM-IV-TR as schizophrenia, and who presents now mainly negative symptoms after passing an acute stage. By modified use of the Child Behavior Checklist (CBCL) as a retrospective assessment questionnaire, the parents of the patients and of control subjects rated their childhood behavior.

**Results:** A discriminant analysis using all items of CBCL correctly classified 99.0% of the population. Notable in an item-level analysis was an extremely attenuated aggression in personal relations in the schizophrenia subjects. Among eight subscales of the CBCL, those of Withdrawal, Social Problems, Attention Problems and Aggressive Behavior contributed most to the accuracy of the prediction of group membership.

**Conclusions:** It was suggested that subclinical behavioral and psychological characteristics of schizophrenia already exist in the

patients' childhood, among which lack of aggressive behaviors might be one of the core features.

### P0133

Anomalies of subjective experiences as basic phenotypes of schizophrenia spectrum disorders: A review of three empirical studies

P. Handest<sup>1</sup>, J. Parnas<sup>2</sup>. <sup>1</sup>Cognitive Research Unit, University Department of Psychiatry, Hvidovre, Denmark <sup>2</sup>National Research Foundation, Center for Subjectivity Research, University of Copenhagen, Copenhagen, Denmark

**Background:** Anomalous subjective experiences are thought to be intrinsic to schizophrenia and considered as constituting the phenotypic validity anchor of the schizophrenia spectrum concept.

Although neglected in modern psychiatry, due to the dominating behaviouristic approach, they nevertheless have been thoroughly investigated in continental European psychiatry, where it has been shown that their presence antedates future psychosis. Anomalous experiences of self-awareness (self-disorders) are a sub-group of subjective pathology, and has been hypothesized to constitute a core phenotype of schizophrenic spectrum disorders. Our research team has participated in the development of a self-disorder scale, EASE, based on empirical studies, clinical experience, phenomenological philosophy and existing psychopathological scales. A part of the EASE-items is overlapping the BSABS. These common psychopathological phenomena have been shown to be predictors of later development of schizophrenic psychosis. Results from three separate studies making the basis of the EASE are presented.

**Method:** Drawing on the results of our own three separate empirical studies the distribution of self-disorders in patients with schizophrenia, psychotic bipolar illness, schizotypal disorder and other mental illnesses, and relatives with no mental illness is described.

**Results:** It is shown that self-disorders are common and equally frequent in schizophrenia and schizotypal disorder, and significantly less common among patients with psychotic bipolar illness and other mental illnesses, and almost absent in the relatives without mental illness.

**Conclusion:** The results support the schizophrenia spectrum hypothesis and points to self-disorders as a phenotype of schizophrenia-spectrum disorders. Self-disorders appears to be possible predictors of schizophrenic prodromal states.

### P0134

Structural brain abnormalities in the early phase of schizophrenia

R. Herold<sup>1</sup>, A. Feldmann<sup>2</sup>, T. Tenyi<sup>1</sup>, F. Kover<sup>3</sup>, S. Fekete<sup>1</sup>. <sup>1</sup>University of Pecs, Department of Psychiatry and Psychotherapy, Pecs, Hungary <sup>2</sup>University of Pecs, Department of Neurology, Pecs, Hungary <sup>3</sup>University of Pecs, Neuro CT Diagnostic Center, Pecs, Hungary

**Background:** It is well known that schizophrenia is characterized by structural brain abnormalities with neurodevelopmental origin. These abnormalities can be detected with quantitative and structural MRI methods that have an emergent role in psychiatric disorders. In our study we used voxel-based morphometry (VBM) that is the most frequently used structural MRI method.

**Method:** We compared eight patients with first episode schizophrenia and eight, age-matched healthy subjects to detect focal tissue differences in gray and white matter, and cerebrospinal fluids between groups. High resolution T1 weighted 3D MPRAGE structural