carriers, while male participants with a met/met allele showed greater deactivations compared to val/val carriers. There was no main effect of the COMT polymorphism, gender or genotype by gender interaction on task performance. We propose that the observed effects of gender and COMT allele on brain activations arise from differences in dopamine levels in these groups and that the gender differences and gender genotype interaction may be due to the downregulation of COMT by estrogen.

P0369

Increase of prefrontal cortex blood flow during the performance of the computer version trail making test – the second report

M. Kubo [1], C. Shoshi [1], T. Kitawaki [1], R. Takemoto [1], K. Kinugasa [2], H. Yoshida [2], C. Honda [2], M. Okamoto [1]. [1] *Okayama University Graduate School, Okayama, Japan* [2] *Okayama Ryogo Center, Okayama, Japan*

We have reported a blood flow increase in the prefrontal cortex during the performance of the computer version TMT. Although TMT-A was first performed and followed by TMT-B in the previous study, the order was reversed in the present study,i.e., TMT-B was first performed and then followed by TMT-A, and differences in the change of blood flow were compared between the two modes of TMT.

Nine healthy student volunteers (20.7 ± 1.6 yr) performed two different sets of TMT-B. After a resting period of 30 sec, they performed four different sets of TMT-A. Changes of oxyHb and deoxyHb were monitored by 22-channel NIRS from 30 sec before the start of TMT-B through 30 sec after the end of TMT-A. The mean changes of blood flow over a period of 10 sec just before the start of TMT-B and TMT-A, and over a period of 100 sec after the start of TMT-B and TMT-A were determined.

The increase of oxyHb was prominent in the right lateral prefrontal cortex.

The results suggest that the blood flow increases in the prefrontal cortex during the start of either TMT-A or TMT-B. The location of blood flow increase did not change whether TMT-B was performed first or after TMT-A. Therefore, the blood flow increase observed only in the right prefrontal cortex in the previous study could not be due to familiarization of the test. In contrast, TMT-A apparently exhibits a familiarization effect, since blood flow increase was not observed when TMT-A was performed after TMT-B.

P0370

Increase of prefrontal cortex blood flow during the performance of the computer version trail making test – the first report

M. Kubo [1], C. Shoshi [1], T. Kitawaki [1], R. Takemoto [1], K. Kinugasa [2], H. Yoshida [2], C. Honda [2], M. Okamoto [1]. [1] *Okayama University School of Health Sciences, Okayama, Japan* [2] *Okayama Ryogo Center, Okayama, Japan*

We measured concentration changes of oxyHb and deoxyHb in the prefrontal cortex during the performance of the computer version Trail Making Test(TMT) by multichannel NIRS using near infrared light pairs which are more sensitive for detecting changes of oxyHb and deoxyHb.

Sixteen healthy student volunteers performed four different TMT-A sets, and following 30 a sec resting period, two different TMT-B sets. Changes of oxyHb and deoxyHb were monitored by 22 channel NIRS from 30 sec before the start of TMT-A through 30 sec after the end of TMT-B. The mean changes in subjects over a period of 10 sec just before the start of TMT-A and TMT-B, and a period of 50 to 60 sec after the start of TMT-A and TMT-B were determined. OxyHb increased while deoxyHb decreased in the bilateral prefrontal cortices during the performance of TMT. The increase of oxyHb was prominent in the right lateral prefrontal cortex, especially during TMT-A.

On the other hand, deoxyHb significantly decreased in the bilateral prefrontal cortices especially during TMT-A.

The results suggest that blood flow increases in the prefrontal cortex during the performance of the computer version TMT.

P0371

Functional imaging of neural responses to emotional interference before and after cognitive behavioural therapy in major depression

M.T. Mitterschiffthaler [1], S.C. Williams [1], N.D. Walsh [2], C. Donaldson [1], J. Scott [1,3], A.J. Cleare [1], H. Steiner [1], C.H. Fu [1]. [1] *Institute of Psychiatry, King's College, London, UK* [2] *School of Medicine, University of Pittsburgh, Pittsburgh, PA, USA* [3] *Department of Psychiatry, Royal Victoria Infirmary, Newcastle upon Tyne, UK*

Background: The present functional magnetic resonance imaging (fMRI) study investigated neural changes in relation to mood biased processing in depression, before and after cognitive behavioral therapy (CBT) using an emotional Stroop task.

Methods: Sixteen unmedicated patients (mean age 40 years), fulfilling DSM-IV diagnosis for unipolar major depression underwent fMRI, prior to and after 16 once-weekly sessions of CBT. Sixteen matched healthy volunteers were scanned at similar time intervals. In an emotional Stroop task negative and neutral words were presented in various colors and volunteers had to name the color of words. Latencies were recorded to determine behavioral emotional interference effects. MRI images were acquired using clustered image acquisition. Whole-brain and region of interest analysis examined the neural basis of interference and mood biased processing.

Results: At baseline patients displayed increased latencies during color naming negative words, in comparison to neutral words and in relation to healthy volunteers. After treatment, latencies did not significantly differ between groups. With regard to neural activity, depressed patients showed increased activation at baseline in amygdala, dorsolateral prefrontal cortex (DLPFC), and ventrolateral prefrontal cortex (VLPFC), which normalized after CBT. Additionally, hyperactivation in the rostral anterior cingulate at baseline was positively correlated with symptom reduction after CBT.

Conclusions: Evidence was found for an emotional interference effect during acute states of depression which improved following CBT. The neural basis is associated with increased activity in the amygdala, DLPFC and VLPFC which normalized after treatment. CBT seems to affect behavioral biases and neural circuits involved in processing negative information.

P0372

The effect of repetitive transcranial magnetic stimulation add on serotonin reuptake inhibitors in panic disorder

J. Prasko [1,2,3], M. Bares [1,2,3], J. Horacek [1,2,3], M. Kopecek [1,2,3], T. Novak [1,2,3], B. Paskova [1,2,3], J. Vyskocilova [1,2,3], R. Zalesky [1,2,3]. [1] *Prague Psychiatric Centre, Prague, Czech Republic* [2] *3rd Faculty of Medicine, Charles University, Prague, Czech Republic* [3] *Center of Neuropsychiatric Studies, Prague, Czech Republic*

https://doi.org/10.1016/j.eurpsy.2008.01.1039 Published online by Cambridge University Press

Background: The Repetitive Transcranial Magnetic Stimulation (rTMS) can modulate the cortical activity. The goal of our study was to assess whether the rTMS would facilitate effect of serotonin reuptake inhibitors in patients suffering from panic disorder.

Method: Fifteen patients suffering from panic disorder resistant to serotonin reuptake inhibitor (SRI) therapy were randomly assigned to either active or to sham rTMS. The aim of the study was to compare the 2 and 4 weeks efficacy of the 10 sessions 1 Hz rTMS with sham rTMS add on SRI therapy. We used 1 Hz, 30 minutes rTMS, 110% of motor threshold administered over the right dorso-lateral prefrontal cortex (DLPFC). The same time schedule was used for sham administration. Fifteen patients finished the study. The psychopathology was assessed using the rating scales CGI, HAMA, PDSS and BAI before the treatment, immediately after the experimental treatment and 2 weeks after the experimental treatment by an independent reviewer.

Results: Both groups improved during the study period but the treatment effect did not differ between groups in any of the instruments.

Conclusion: The low frequency Repetitive Transcranial Magnetic Stimulation administered over the right dorso-lateral prefrontal cortex after 10 sessions did not differ from sham the Repetitive Transcranial Magnetic Stimulation that was add on serotonin reuptake inhibitors in patients suffering from panic disorder.

Supported by the project n. MŠMT ČR 1M0517

P0373

Body integrity identity disorder-characteristics and neural correlates

A. Stirn [1], A. Thiel [1], S. Skoruppa [1], E. Kasten [2], S. Oddo [1]. [1] *Department of Psychiatry, Psychosomatic & Psychotherapy, JW Goethe University Hospital, Frankfurt A.M., Hessen, Germany* [2] *Institute for Medical Psychology, University Hospital Schleswig-Holstein, Luebeck, Germany*

Body Integrity Identity Disorder (BIID) describes a pathology which is associated with an overwhelming wish of amputation of one or more healthy body parts. Originally the disease was indicated as ''Apotemnophilia'', afterwards as ''Amputee-Identity-Disorder''. Patients feel an incompleteness of their body identity. Only the amputation is perceived as solution for the conflict. The wish of amputation often exists since their childhood or adolescence. The persistent wish for amputation is very incriminating for the patients, embarrassing and can have devastating consequences like self-amputation. Little is known about the aetiology and pathogenesis. In the very few described single-cases neither psychotherapy nor psychotropics were efficient.

To gain new insights into the aetiology and neural mechanisms of the BIID pathology, we arranged a complex psychometric examination, clinical interviews and functional magnetic resonance imaging (fMRI) measurements with male BIID patients and healthy subjects as control group. In the fMRI- Scanner patients looked to manipulated pictures of themselves, in which they are shown in the actual, real state and the desired state with one/both arms or legs amputated and with prosthesis. The psychometric examination contained different screening instruments for depression, personality, patterns of relationship, attachment etc.

Results of our first patient showed that he had superior intelligence, good social abilities, a challenging employment and a longtime relationship. He was inconspicuous in all psychometric measurements.

The neuroimaging findings of all patients are evaluated and interpreted in the context of biography and personality features. Our study furnishes new insights into characteristics, brain activity and possible therapeutic implications.

P0374

Functional connectivity of cortex, amygdala, insula – fMRI data analysis using vector autoregression

W. Tschacher [1], K. Sander [2]. [1] *University Hospital of Psychiatry, Bern, Switzerland* [2] *Leibniz Institute for Neurobiology, Magdeburg, Germany*

Owing to recent technological advances with high-Tesla MRI scanners, functional imaging of neural tissues with high resolution of the temporal as well as spatial domains comes within reach. Thus, an increasing demand for tools that allow the modeling and evaluation of temporal data, i.e. data that carry sequential information, will likely result. Time series models based on such data can be computed to study the dynamical connectivity of brain structures. We focused on the method of vector autoregression (VAR) by which the strength of sequential interactions among multiple BOLD responses can be assessed, as acquired by fMRI. The method of time series analysis was applied in data sets from 20 subjects listening to auditory stimuli. These stimuli were of an affective nature (a person sobbing; a person laughing) and control stimuli (backward-sobbing, backward-laughter, silence). Each data set consisted of 207 consecutive MR scans. Models composed of 6 variables (i.e., the following regions of interest: Amygdala left/right; Insula left/right; Auditory cortex left/right) were computed. VAR of these variables resulted in a statistically significant model of the sequential interactions among these variables in the sample. It was found that the auditory cortex was directly influenced by the independent variables (the auditory stimuli). Several further interactions were observed, prominently among these an inhibiting effect of the auditory cortex on the amygdala. In addition to these functional results, the methodological merits and limits of the proposed method are discussed.

P0375

Volume reduction of dorsolateral prefrontal cortex in schizophrenia: A high resolution imaging study

U. Volpe, A. Mucci, P. Bucci, E. Merlotti, D. Russo, S. Galderisi, M. Maj. *Department of Psychiatry, University of Naples SUN, Naples, Italy*

The term ''deficit syndrome'' (DS) refers to a diagnostic subtype of schizophrenia characterized by the presence of primary and enduring negative symptoms. Several authors have supported the hypothesis that DS represents the more severe end of the schizophrenia spectrum; however, the empirical evidence did not clarify this interpretation. The present study is aimed to evaluate neuromorphological abnormalities in Deficit (DS) and Nondeficit Schizophrenia (NDS). We investigated a group of 18 patients with a DSM-IV diagnosis of schizophrenia, categorized as DS (N=10) and NDS (N=8), and 8 matched healthy controls. All subjects underwent a high resolution imaging protocol (MPRAGE) and an extensive psychopathological evaluation. Images were segmented by means of the algorithm implemented within the SPM2 software; quantitative measures of gray matter were manually obtained for hippocampal and dorso-lateral prefrontal (DLPF) regions. Gray matter in DLPF cortex was significantly reduced in the NDS group, with respect to both DS and healthy subjects. ANCOVA analyses revealed that the volumetric abnormalities found in DS vs. NDS patients were not related to dose or type of antipsychotic treatment. Our structural neuroimaging findings in subjects with schizophrenia, revealed significant differences between the DS and NDS subtypes, which were not influenced by antipsychotic medication, and suggested that DS does not simply represent the more severe end of the schizophrenia spectrum.

https://doi.org/10.1016/j.eurpsy.2008.01.1039 Published online by Cambridge University Press