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.

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P0373

Body integrity identity disorder-characteristics and neural correlates

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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

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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

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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.