Conclusion: Prodromal features of psychosis are prevalent in adolescence. It may be difficult to screen adolescent subjects at risk for developing schizophrenia with a questionnaire in a general population, especially as these symptoms do not appear to be more common among subjects with familial risk.

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The efficacy of weight management training in patients with schizophrenia

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Introduction: In this study, we want to evaluate the efficacy of a preventive weight management training. We hypothesize that this training will reduce weight gain, pathological metabolic parameters and will increase drug compliance and subjective well-being.

Method: 69 schizophrenic patients were included in this study, in all patients olanzapine was newly initiated. They were randomly assigned to verum and control group. Patients in the verum group attended the training every second week for 24 weeks. Physical and chemical parameters where measured regularly, and also eating behaviour, physical activity, quality of life, mental state and psychosocial adaptation.

Results/Discussion: 28 patients dropped out during the first 4 weeks of intervention. The data of the remaining 41 patients (verum group N=21, control group N=20) was analysed. During the intervention there was no significant difference between the groups regarding weight-gain. Both groups gained weight slightly (verum group 3.02±4.06kg, control group 2.80±4.84kg). Concerning triglycerides we found an interaction effect of time and group ($F(1)=6.697$, $p=.025$), the same was found on the second scale of the questionnaire for eating behaviour (FEV), which measures to what degree eating behaviour is disturbed ($F(1)=8,381$, $p=.013$) and on the social functioning scale of the SF-36 ($F(2,38)=3,34$, $p=.032$). Regarding glucose tolerance challenge, there was a significant group effect at the first time of measure after intake of the glucose-dilution ($F(1)=9.15$, $p=.016$). Our results do not support the hypothesis that the intervention has the desired effects on body weight, but it influenced positively other metabolic parameters, eating behaviour and social functioning.

Near-infrared spectroscopy for the guidance of inhibitory rTMS treatment of auditory verbal hallucinations in schizophrenic patients

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Background and aims: Auditory verbal hallucinations (AVHs) are among the most frequent and disabeling symptoms of schizophrenic diseases. In approximately one quarter of patients, AVHs have to be considered as therapy-refractory with regard to pharmacological treatment options. This group of patients may benefit from a treatment protocol with repetitive Transcranial magnetic stimulation (rTMS) aiming on an inhibition of AVH-associated increased activity of auditory brain areas in the temporal cortex. However, optimal protocols for the guidance and control of such innovative treatment regimens are still lacking.

Methods: We propose the application of a non-invasive optical imaging technique (functional Near-Infrared Spectroscopy; fNIRS) for the measurement of the AVH-related activity of the auditory cortex, for the guidance of the rTMS-treatment and for the control of a treatment success on the brain metabolic level.

Results: In the reported patient, NIRS measurement indicated AVH-related activity in the left auditory cortex which strongly decreased after a period of three weeks with daily inhibitory rTMS treatment, in parallel with drastically diminished AVHs.

Conclusions: This is the first report of a NIRS-guided and –controlled inhibitory rTMS treatment of therapy-refractory AVHs in a schizophrenic patient. Given the excellent clinical applicability of the applied methods, the combination of fNIRS and rTMS might have the potential to establish new treatment options in psychiatry aiming on the modulation of pathological regional brain activity patterns.

The effect of long term treatment with olanzapine on neuropsychological prefrontal test in schizophrenia

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Background: Neuropsychological studies show the positive effect of treatment with atypical neuroleptics on cognitive functions in schizophrenia. The aim of this study was to assess the effect of olanzapine on prefrontal functions during 12-months of treatment in schizophrenia.

Methods: The study was performed in 48 schizophrenic patients, aged 20-48, who were treated with the generic olanzapine (Zolafren - Adamed, Poland). Psychometric evaluation was done using PANSS. Neuropsychological assessments included Wisconsin Card Sorting Test(WCST) and Trail Making Test and Stroop Color-Word Interference Test. The measurements were performed before, after 3,6 and 12 months of treatment. The daily dose of olanzapine was 5-25mg/day (mean 14.9 mg/day) after 3 month of treatment, and 5-20 mg (mean 13.6 mg/day), after 6 and 12 months of treatment.

Results: The intensity of psychopathology on PANSS was at baseline 99 points, and after 3, 6 and 12 months of treatment 63, 54 and 51p, respectively, with significant systematic improvement during olanzapine treatment ($p<0.001$, ANOVA Friedman Test). After 3 month of treatment, there was a significant amelioration on TMT, Stroop, and WCST-conceptual responses. A after 3,6 and 12months of treatment significant improvements on TMT, Stroop and WCST were observed. The level of cognitive improvement was assessed with the decrease on negative symptoms. After 3 month – this correlated with improvement on TMT and WCST-perseverative errors, and after 6 and 12 months with TMT A and WCST perseverative errors.

Conclusions: The results obtained show a significant improvement of psychopathology and neuropsychological frontal lobe tests after long-term treatment with olanzapine.

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