

**P45.18**

Paroxetine binding in aggressive schizophrenic patients

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Treatment of aggression in schizophrenic patients is a major challenge. We sought to examine the efficacy of augmentation of antipsychotic treatment with pindolol in the amelioration of aggression. Thirty male inpatients meeting DSM-IV criteria for schizophrenia, aged 20–65 years involved in 4 or more aggressive incidents in the two previous months, were enrolled in a double-blind crossover study. Aggression was evaluated per incident, with the Overt Aggression Scale (OAS). Positive and Negative Syndrome Scale (PANSS) was administered at baseline, crossover and at endpoint. Patients received either pindolol or placebo augmentation 5mg X 3/day until crossover, then switched. No significant differences were found in the PANSS scores between the placebo and pindolol treatments. OAS scores were significantly reduced for number of aggressive incidents towards objects and other persons during pindolol treatment (0.59 vs 1.46,  $F=6.09$ ,  $p<0.02$ ; 1.96 vs 3.23,  $F=4.17$ ,  $p<0.05$  respectively). Similar results were obtained for severity of incidents (0.89 vs 3.58,  $F=19.42$ ,  $p<0.0001$ ; 2.89 vs 6.85,  $F=10.11$ ,  $p<0.004$  respectively). Pindolol, with its dual 5HT<sub>1A</sub> blocking effect ameliorated both number and severity of aggressive acts. Influence on severity may be associated with a 5HT<sub>1A</sub> antagonistic effect.

**P45.19**

Mitochondrial function in neuroleptic-free and medicated schizophrenia

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**Objective:** To assess muscle mitochondrial functions in schizophrenia patients. Neuroleptics have been reported to influence mitochondrial functions. Muscle cell and mitochondrial alterations have been reported in schizophrenia. Schizophrenia has been reported in patients with mitochondrial disorders, which may be due to mutations in nuclear or mitochondrial DNA and cause impaired production of cellular energy, ATP.

**Methods:** Investigations of mitochondrial ATP production rate (MAPR with eight assessments), mitochondrial enzyme activities, and muscle cell morphology were performed in 10 controls, 6 neuroleptic-naïve/free and 9 medicated patients. Analyses were covaried for age because of a significant controls-patients age difference.

**Results:** Six MAPRs ( $p<0.05$ , two  $p<0.01$ ) and an enzyme ratio ( $p<0.05$ ) were decreased in unmedicated patients, and one MAPR ( $p<0.01$ ) and an enzyme activity ( $p<0.01$ ) in medicated patients compared to controls. Two MAPRs increases ( $p<0.05$ ) and an enzyme activity decrease ( $p<0.05$ ) were found in medicated compared to unmedicated patients. Non-specific light and/or mitochondrial electron microscopy alterations were detected in 13 patients (87%). Deficiency of stain for the mitochondrial enzyme complex COX was detected in five patients (33%).

**Conclusion:** Mitochondrial involvement in schizophrenia cannot be excluded.

**P45.20**

Schizophrenia patients who smoke have a faster finger tapping rate

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The increased rate of smoking in schizophrenic patients remains unexplained and may reflect attempts at self-treatment. The effect sought from smoking may be related to nicotine's stimulating action. We tested this hypothesis by examining the relationship between smoking status and finger tapping rate, a measure of central processing, in schizophrenia patients treated with atypical antipsychotics. Smokers showed significantly faster finger tapping rates than non-smokers. This was not related to clinical state, illness chronicity, medication side effects, antipsychotic dose or plasma concentrations. Nicotine can improve central processing in medicated schizophrenia patients and this may constitute part of the incentive for smoking.gative symptoms.

**P45.21**

Reversed lateralisation of temporal activation during speech production in thought disordered patients with schizophrenia

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**Background:** Formal thought disorder is a core symptom of schizophrenia. It is associated with a reversed lateralisation of the superior temporal cortex volume, an area which is implicated in lexical retrieval. We investigated the neural correlates of word retrieval during continuous speech in patients with formal thought disorder using functional Magnetic Resonance Imaging (fMRI).

**Methods:** Blood oxygenation level dependant (BOLD) contrast was measured with fMRI while 6 patients with schizophrenia and 6 healthy control subjects spoke about 7 Rorschach inkblots for 3 minutes each. Subjects produced varying amounts of speech during each run. In a within subject design, the number of words produced was correlated with the BOLD contrast in the 2 runs in each participant that showed the highest variance of speech output.

**Results:** In control subjects, the amount of speech produced was mainly correlated with activation in the left superior temporal gyrus. In the patient group, the main correlations were in the right superior temporal gyrus.

**Conclusions:** During the production of continuous speech patients with formal thought disorder show a reversed laterality of activation in superior temporal cortex. This is consistent with findings of perturbed hemispheric interaction in schizophrenia, particularly in patients with formal thought disorder.

**P45.22**

Monitoring of the psychotherapeutic process in the group therapy of schizophrenia

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The development of the psychotherapy of schizophrenia introduces the concept that the patient's autism is a way out of an irreversible