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## NEUROTRANSMITTERS BLOOD LEVEL, ASR PREPULSE MODIFICATION AND ANTISACCADES DEFICITS IN SCHIZOPHRENIA: IMPLICATION FOR IDENTIFICATION OF SCHIZOPHRENIA ENDOPHENOTYPES

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**Objectives:** Study of psychophysiological candidate schizophrenia endophenotypes in relation with neurotransmitters blood level and mental disorders.

**Methods:** 23 patients with schizophrenia and 24 healthy subjects performed horizontal antisaccades. Acoustic startle response (ASR) prepulse modification was studied according to protocol, recommended by Consortium on the genetics of schizophrenia. Neurotransmitters blood plasma level was estimated using HPLC.

**Results:** Significant increase of errors and saccade latencies was revealed in patients compared to controls. ASR prepulse inhibition (PPI) at 60 ms lead interval and ASR prepulse facilitation (PPF) at 2500 ms lead interval were impaired in patients. Analysis didn't reveal any correlations between ASR and antisaccades measures in patients while in healthy controls high initial ASR amplitude correlated with incorrect antisaccades number and PPF level correlated with antisaccades latencies. Significantly higher individual variability of plasma serotonin, glutamate and taurine content was found in patients compared to controls. Positive correlations of PPI with glutamate and taurine content were observed in patients but not in controls. At the same time, correlation between PPI and serotonin turnover ratio was positive in control group and negative in patients. Antisaccade latencies in controls displayed negative correlation with DOPAC and taurine level while in patients they positively correlated with dopamine and negatively with serotonin turnover ratio. It was also found that antisaccades parameters and ASR measures displayed correlations with different PANSS scales.

**Conclusion:** These data support the hypothesis that PPI and antisaccades are associated with different neural networks and have different genetic aetiology.