

P-1324 - ELECTROPHYSIOLOGICAL INVESTIGATION OF REWARD ANTICIPATION AND FEEDBACK-PROCESSING IN SCHIZOPHRENIA

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Introduction: Patients with schizophrenia often show a reduced ability to experience pleasure, but previous studies demonstrated that they are more characterized by “anticipatory anhedonia”, rather than a deficit in experiencing pleasure itself (“consummatory anhedonia”). However, the brain circuits related to anticipation of pleasure and processing of reward signals in schizophrenia are yet unclear.

Objectives/aims: We aimed to examine reward anticipation and feedback processing using event-related potentials (ERPs) in 24 stabilized patients with schizophrenia and 14 healthy controls.

Methods: ERPs were recorded during a Monetary Incentive Delay task during anticipation of five different outcomes, small (SR) or large (LR) reward, small (SP) or large (LP) punishment or no-outcome (NO), and during feedback processing.

Results: Patients had lower scores on TEPS anticipatory pleasure and BIS/BAS fun-seeking scales and higher scores for anhedonia and punishment sensitivity, than controls. The anticipation-related negativity was reduced in patients. Controls, but not patients, showed a larger amplitude for LP versus NO and LR. Fronto-central amplitude in patients was inversely correlated with TEPS anticipatory pleasure. The feedback-related negativity had a lower amplitude for LR than for all other conditions in controls, but not in patients. Only in controls, FRN was inversely correlated with TEPS consummatory pleasure.

Conclusions: The frontal negativity during outcome anticipation discriminate punishment from other outcomes only in controls. The lower the amplitude of this component, the greater the deficit in anticipatory pleasure. As to FRN, only controls modulate the frontal negativity during processing of outcome and this modulation is associated with consummatory pleasure.