PW01-238 - **ELECTROPHYSIOLOGICAL CORRELATES OF BEHAVIOURAL INHIBITION AND DECISION MAKING PROCESSES IN PATIENTS WITH IMPULSE CONTROL DEFICITS**

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Introduction: Patients with impulse control deficits often show cognitive abnormalities especially in executive abilities. One possibility to examine the underlying neurophysiological mechanisms is to assess evoked potentials. In the present study an adapted go/nogo-paradigm was used to investigate electrophysiological correlates of voluntary selection and behaviour control processes in patients suffering from alcohol dependence and attention deficit hyperactivity disorder (ADHD).

Methods: 15 patients with alcohol dependence, 15 adult patients with ADHD and 15 control persons were included into the study. Patients with alcoholism were examined twice: before and after an inpatient detoxification.

The participants performed a go/nogo task, comprising three different conditions:

Apart from the *go*-condition (button press required) and the *nogo*-task (inhibition of a behavioural response), a *voluntary selection* task was included in which participants were allowed to freely decide, whether to press the response button or not.

Results and discussion: Response inhibition and voluntary selection processes were related to a fronto-central negativity after 200 ms (N2) and a positivity after 300 ms (P3) in healthy subjects. In patients, the P3 amplitude was reduced compared to the controls. In addition, alcohol dependent patients did not show a N2 potential.

The results indicate fronto-central dysfunctions dysfunctions in either patient group. However, different neuronal processes seemed to be affected in patients with ADHD and patients with alcoholism.

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