
RELATIONSHIP BETWEEN PSYCHOPHYSIOLOGICAL PROCESSES INVOLVED IN ALCOHOL DEPENDENCE

M. Marin¹, G. Rubio¹, R. Jurado¹, G. Ponce¹, I. Martinez¹, M.J. Alvarez¹, S. Moratti¹

¹Psychiatry, Hospital Universitario 12 de Octubre, Madrid, Spain

Background. Current data suggest that at least three psychophysiological paradigms are involved in Alcohol Dependence: attentional bias; affective modulation of the startle reflex and behavioural inhibition. These three paradigms have not been studied together in a sample of alcohol dependent subjects.

Objectives: To show that the performance on these three psychophysiological processes allows discriminating alcohol dependent subjects (with different severity) from healthy controls.

Methods: 59 alcohol dependent subjects were assessed with the following three psychophysiological tasks: The dot probe task (which assesses attentional bias), the startle response when viewing alcohol cues (which evaluates affective modulation of the startle reflex), and the Modified-Stop Signal-Task (which measures behavioral inhibition). The Severity of Alcohol Dependence Scale (SAD) was used for grouping patients based on their dependence severity. 52 healthy subjects were assessed as the control group.

Results: All three paradigms correctly discriminated between patients and controls. Patients were divided into three subgroups according to their scores on the SAD (mild, moderate and severe dependence). The performance of the three groups in the three paradigms studied was also different. Patients with more severe dependence had more attentional bias for alcohol cues, exhibited lower magnitudes of startle response when viewing alcohol cues, and showed lower capacity to inhibit their behaviour when words related to alcohol were being seen.

Conclusions: Subjects with alcohol dependence showed different psychophysiological response patterns compared to controls in the three paradigms studied. These response patterns seem to be associated with the severity of dependence, and they could be used to determine the outcome of the treatment in patients with alcohol dependence.