Published in : Journal (2006), vol. 16, Suppl.4, pp. S496
DOI:10.1016/S0924-977X(06)70671-X
Status : Postprint (Author's version)

COGNITIVE TOPOGRAPHY IMBALANCE IN ALCOHOLISM AND PSYCHIATRIC COMORBIDITY

P. Papart[1], F. Liota[2], F. Bartholomé[2], M. Ansseau[1]

[1]*University of Liège/C.H.U. Sart Tilman, Department of Psychiatry, Liège, Belgium;*
[2]*St Joseph Hospital, Psychiatry, Liège, Belgium*

KEYWORDS: Alcoholism, Psychiatric disorder

Published in : Journal (2006), vol. 16, Suppl.4, pp. S496
DOI:10.1016/S0924-977X(06)70671-X
Status : Postprint (Author's version)

Alcoholism is often associated with other psychiatric disorders (especially anxiety disorders, mood disorders and personality disorders) and can be complicated by cognitive impairment (for example, amnestic disorder and dementia). To assess if the severity of psychiatric comorbidity could be correlated to central cortical dysfunction, we study the Contingent Negative Variation (CNV) in a group of alcoholic patients. CNV is an event related potential that develops during a simple experimental situation associating a warning and an imperative stimuli. The CNV recording procedure has been described previously in detail (Papart et al, 1997). Briefly, the CNV paradigm consisted of a warning stimulus (S1: 1000 Hz, 50 ms tone) followed 1 second later by an imperative stimulus (S2: 18/second light flashes) that the subject has to stop by pushing a button. In this study, we used a CNV paradigm with a short interstimulus interval of 1 second duration. CNV amplitude was calculated as the voltage difference between the 1 second baseline before S1 and the 200 milliseconds before S2. Classically, topographic studies have shown maximal CNV amplitude in the central region with a decrease in frontal and parietal areas. The purpose of the present study was to assess this CNV distribution in alcoholism. We recorded CNV on two derivations (Fz and Cz) in a group of 73 alcoholic inpatients with a diagnosis of dependence or abuse according to DSM–IV criteria. Clinical symptomatology was rated by the Irritability Depression Anxiety (IDA) scale (Snaith et al, 1978). We observed that mean CNV amplitude was higher in Fz when compared to Cz (-11 ± 5.9 mV vs -10.7 ± 6.3 mV). Whereas 35 subjects exhibited higher CNV amplitude in Cz when compared to Fz (C group), 37 subjects where characterized by higher CNV amplitude in Fz than in Cz (F group) and one subject has identical values in both derivations. When compared with the IDA scale, we found that the F group exhibited a higher depression score than the C group (6.8 ± 2.9 vs 5.3 ± 3.1) ($p < 0.05$). No significant differences were observed on the other sub-scales: anxiety (8.9 ± 3.4 vs 7.3 ± 3.7) ($p = 0.08$) and irritability (8.6 ± 5.2 vs 7.8 ± 5.4) ($p = 0.54$). There were no differences in age (48 ± 13 vs 46.5 ± 9 years) ($p = 0.65$) and sex (23 M/14 F vs 24 M/11 F) ($p = 0.57$) between the two groups. These results suggest that a impairment of inhibitory frontal processes (higher CNV amplitude in Fz than in Cz) could be correlated with a higher level of psychopathology in alcoholism, especially depression. CNV could represent an interesting index to assess the severity of comorbidity in alcoholism and to propose specific treatment.

Published in : Journal (2006), vol. 16, Suppl.4, pp. S496
DOI:10.1016/S0924-977X(06)70671-X
Status : Postprint (Author's version)

References

[1] Papart P, Ansseau M, Timsit-Berthier M, 1997, Influence of diazepam on Contingent Negative Variation, Human Psychopharmacol, 12, 95—98.

[2] Snaith RP, Constantopoulos AA, Jardine MY, McGuffin P, 1978, A clinical scale for the self-assessment of irritability, Br. J. Psychiatry, 132, 164–171.