

18 and 55 were selected. From their number, around 1000, 250 patients were selected by a method which allowed an adequate spread of diagnostic categories. The OPCRIT programme (McGuffin et al, 1991) was applied to the case notes, each patient having a minimum of 2 admissions, and admissions being assessed to a maximum of 5. Diagnoses were generated according to a variety of operational criteria, and 5 patient groups emerged — namely schizophrenic, manic depressive, depressive, atypical, and inconsistent. The schizophrenic group was comprised of patients who on at least two admissions were given a schizophrenic diagnosis by at least four out of five sets of OPCRIT criteria. The manic depressive group was comprised of patients who on at least two admissions were given a manic diagnosis by at least three out of four sets of OPCRIT criteria, or who on at least one admission were given a manic diagnosis and on at least one other admission were given a depressive diagnosis by at least three out of four sets of OPCRIT criteria. The depressive group was comprised of patients who received a depressive diagnosis on at least two admissions by at least three out of four sets of OPCRIT criteria, and the atypical group was comprised of patients who were not given a diagnosis of schizophrenia, mania or depression on as many as four out of five OPCRIT criteria, on more than one admission. The inconsistent group was comprised of patients whose diagnoses showed no consistency and who fitted none of the other categories.

A number of these patients will be scanned using a 1-Tesla MRI machine, and correlates of the diagnostic categories and of the symptom spread will be determined.

BRAIN MAPPING IN THE STUDY OF DEPRESSION IN ALCOHOLISM

J. Cabanyes, A. Garrido, I. Basurte, J. Uncal, M. Mediano, A. Rivera. *Clínica Nra. Sra. de la Paz, San Juan de Dios, López de Hoyos 259 28043, Madrid, Spain*

Introduction: The possible links between dependence of alcohol and depression patterns have been dealt with in many specialized publications. However, a final and direct relationship between them has not been proved. How is known, brain mapping is a study computerized of the electric cerebral activity and its topographical distribution. Our objective has been to try to determine a different neurophysiology pattern in patients with alcoholism, in function or not of the presence of depressive symptomatology.

Material and method: Subjects: Three groups of study were made in a sample of 50 alcoholic patients who followed the ICD-10 criteria for alcoholism and they were hospitalized for dextoxication program. These groups were alcoholics without depressive symptomatology (ND), alcoholics with depressive symptomatology (CD) and alcoholics with false depression (FD). The Hamilton Scale for depression and the Beck inventory for the depression were used 3 and 10 days after the admission. Likewise the Hamilton Anxiety Scale was used.

Methodology: Brain mapping was performed to every patient eight days after admission. Maps of the means for each group were obtained and also an analysis of variance with T punctuations in order to compare the different groups and establish the statistical significance.

Results: When comparing neurophysiological behavior of each group, in both studied situations (closed and open eyes), an appropriate alpha activity blockade was verified at the ocular opening in the three groups and a significant reduction of the quick activity upon closing the eyes, except for the FD group that showed minimum changes in the values of relative power in this band. On the other hand, we obtained significant differences on power value in CD group in relation to the other groups. Likewise differences in interhemispheric synchronization were verified between them.

Discussion: The data obtained in our study point out significant differences between the three groups, suggesting that the presence or

not of depressive symptomatology in alcoholic patients is correlated with a different neurophysiological behavior. Brain mapping is an useful technique for their study. Presence of anxiety provided that symptomatology could associate to a different mapping pattern which characterized FD group. Nonetheless our data have to be considered with the precaution due to such a preliminary study with little samples. Moreover it has to be taken into account that the study has been made in patients under psychopharmacological treatment.

Conclusions: Our data point out that the brain mapping pattern in alcoholic patients is significantly different in the three studied groups. At the same time, this study suggests that symptomatology of false depression could correspond to a state of anxiety. The repercussions of these discoveries in the prognosis and treatment of this problem could be very important.

EVIDENCE FOR MEDIAL TEMPORAL LOBE CHANGES IN SCHIZOPHRENIA: A QUANTITATIVE MRI STUDY

I. Gerdsen¹, S. Frost¹, J. Schröder¹, M. Essig², K. Baudendistel², L. Schad². ¹ *Department of Psychiatry*, ² *German Center of Cancer Research, University of Heidelberg, FRG*

Background: Temporal limbic changes were described in numerous post mortem and neuroimaging studies. However, the questions if these changes refer to a generalised process affecting all parts of the brain at a line or do reflect local changes remained unsolved.

Aim: To investigate the relation of temporal limbic changes with respect to the subcortical and frontal changes.

Method: Up to now, 10 healthy controls and 10 DSM IV schizophrenics participated in our ongoing trial. We used a 3D MPRAGE sequence for the T-1-weighted images and a 3D PSIF sequence for the T-2-weighted images on a 1.5T Siemens Magnetom. This sequences provide 128 contiguous slices through the head with a thickness/gap of 1.4 mm/0 mm, TR/TE: 10.0 ms/4 ms, α 0v: 230 mm/230 mm in about 9 min. Total intracranial volume (TIV), volumes of the frontal and temporal lobe, the amygdalahippocampus complex (ABC), the hippocampus, the parahippocampal gyrus, the caudatum and the putamen-pallidum were assessed using the newly developed software NMRWin. Measurements were performed by two independent raters (interrater-reliability: $r = 0.95-0.96$, $p < 0.0001$) on a conventional PC. The volumetric data were corrected for head size by dividing the absolute values by the TIV.

Results: All, but the right AHC and the parahippocampal gyrus, temporal limbic structures differed significantly ($p < 0.05$) between patients. Within the schizophrenics the right AHC was negatively correlated with the right hippocampus ($p < 0.01$) and the left AHC ($p < 0.001$). None of the temporal limbic structures were significantly correlated with the volumes of the frontal lobe or any of the subcortical measures.

Conclusion: Our preliminary findings confirm earlier reports demonstrating temporal limbic changes in schizophrenia and suggest that these changes do not correspond to generalised brain changes.

[1] Marsh, L., Suddath, R.L., Higgins, N., Weinberger, D.R. (1994). Medial temporal lobe structures in schizophrenia: relationship of size to duration of illness. *Schizophr.-Res.* 1994 Feb; 11 (3), pp. 225-38.