MAGNETIC RESONANCE IMAGING IN ALCOHOLIC KORSAKOFF'S SYNDROME: EVIDENCE FOR AN ASSOCIATION WITH ALCOHOLIC DEMENTIA

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A magnetic resonance imaging study of 19 alcoholic Korsakoff patients, 17 non-amnesic alcoholics and 23 non-alcoholic controls was undertaken. Several measures of ventricular size and interhemispheric area were significantly greater in the Korsakoff patients. Interhemispheric fissure size was greater in the non-amnesic alcoholics than the non-alcoholic controls. Cortical grey matter T1 values were essentially the same for the three groups, while the deep grey and the white matter T1 values for the Korsakoff patients were significantly greater than the non-alcoholic controls. These results indicate widespread pathology. Alcoholic dementia may be a more severe form of alcoholic Korsakoff syndrome, aetiologically related to the nutritionally subcortical and does not develop independently of the diencephalic pathology. Alcoholic dementia may be a more severe form of alcoholic Korsakoff syndrome, aetiologically related to the nutritionally induced diencephalic pathology rather than the neurotoxic effects of alcohol on the cortex.

A CONNECTIONIST MODEL OF SEMANTIC DEGRADATION IN ALZHEIMER'S DISEASE

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Neuropsychological studies of patients with dementia of Alzheimer's type (DAT) would suggest that specific semantic information is more susceptible to neuropathology, than general semantic information. For example, patients are better able to recognise an item as an instance of a superordinate category, than they are to name the item (Chertkow and Bub, 1990). They are also better at verifying properties which are true of many items in a category, than those which are specific to few members (Done and Gale, submitted). Such findings have previously been cited in support of hierarchical models of semantic memory (e.g. Collins and Quillian, 1969; Rosch, 1975), in which knowledge is specified at levels ranging from the most general (e.g. animal) to the most specific (e.g. humming-bird). Such models assume discrete levels at which properties are true (e.g. the property 'has wings' is stored at the 'bird' level because it is true of all birds). However, it is rare that properties are true of all members or only one member of a category; rather, they vary between these levels (Komatsu, 1992). This is at odds with the assumptions of hierarchical models, but is better accounted for by neural network models in which the difference between general and specific features, is one of frequency within a training set.

We have designed a modular neural network system to simulate the degeneration. Alcoholic dementia may be a more severe form of alcoholic Korsakoff syndrome, aetiologically related to the nutritionally subcortical and does not develop independently of the diencephalic pathology. Alcoholic dementia may be a more severe form of alcoholic Korsakoff syndrome, aetiologically related to the nutritionally induced diencephalic pathology rather than the neurotoxic effects of alcohol on the cortex.

DIFFERENCES OF DYNAMIC EYE MOVEMENTS IN SCHIZOPHRENIA AND AFFECTIVE DISORDERS — A LABORATORY INVESTIGATION USING ELECTROOCULOGRAPHY

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Background: Smooth pursuit performance varies considerably among individuals and is affected by many factors such as the properties of the stimulus, attention, age and neuropsychiatric disorders. In schizophrenia and affective disorders increased rates of saccadic intrusions have been observed during smooth pursuit. The aim of our ongoing study was to compare various dynamic measures of smooth pursuit and saccadic eye movement among depressive and schizophrenic subjects to evaluate a possible diagnosis related specificity.

Methods: 20 schizophrenic and 20 depressive patients were diagnosed according to DSM-IV criteria. Psychopathological symptoms were assessed on the BPRS, SANS, SAPS and Hamilton Depression Rating Scale. All patients underwent a neuroradiological examination comprising also functional imaging. Pursuit was measured during tracking of a predictable, sinusoidal target motion using the Nicolet Nystar oculomotor standard testing protocol.

Results: Both groups showed an elevated rate of inappropriate saccades which was clearly higher for schizophrenic subjects. Also differences in performance of patients peak velocity to peak stimulus was observed. Mean gain values were 0.69 for depressive patients and 0.96 for schizophrenics. A significant difference was found in asymmetry (p < 0.01) and DC Offset values (p < 0.01) comparing and quantifying left/right symmetry. Other measures including delay and accuracy failed to reach significance.

Conclusion: Our preliminary data show that by oculomotor testing significant diagnosis related differences in eye tracking pattern