subjects (n = 44, age: in mean 40.3 (range 23–76) years, 21 males, 23 females) watching a witty movie ("Mr. Bean") were investigated. The speed of the facial expression "laughing" was more pronounced in subjects with high scores of Zuckerman's sensations seeking scale (general, boredom susceptibility) and Neo-FFI (frankness, neurotizism) than in subjects with low scores. In contrast, the speed of voluntary movements of mouth and eyes was not correlated to the personality measurements. Kinematic analysis of facial expressions seems to be useful in identifying subjects with sensation seeking and related personality styles. Higher speed of facial movements found in these subjects suggests enhanced dopaminergic function in such a personality.

S04.05

PSYCHOMOTOR RETARDATION IN DEPRESSION DURING TREATMENT WITH SSRI's

B.G.C. Sabbe*, W. Hulstijn, M. Pier, F.G. Zitman. *Universities of Nijmegen and Antwerp, Netherlands*

Earlier research on fine motor retardation in inpatients with a Major Depressive Episode (MDE) and on the effects of treatment with SSRI's, has demonstrated that mainly cognitive slowing improved during treatment, while motor slowing only slightly changed (Sabbe et al., 1996, 1999).

Cognitive and motor slowing and their changes were studied by using a computerised device (PC, digitizer and a specially designed pen), that enables measuring and analysing in great detail writing and drawing behaviour. By analysing different kinematic variables of the hand movements, such as the reaction time, the movement time and their components, and by manipulation of the cognitive and motor demands of the different tasks, cognitive processes and motor processes can be studied at the start and during treatment. Cognitive processes encompass attention, perception, working memory and planning, and motor processes include programming, initiation, coordination and execution of the movement.

In the studies that will be presented three research domains will be further explored: (a) the detailed analysis of cognitive and motor slowing in depressed inpatients (MDE) by weekly measurements during a 6-weeks treatment with sertralin (50–100 mg/d); (b) differences between patients with MDE with diurnal variation of depressed mood and patients without this variation; (c) comparison of cognitive and motor slowing in patients with MDE and with dysthymia. It is concluded that psychomotor changes early in treatment, can differentiate between subgroups of patients which show full, mild and none response to treatment.

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S05. The biology and psychology of memory disorder in schizophrenia

Chairs: S.R. Hirsch (UK), J.M. Danion (F)

S05.01

EARLY MEMORY CHANGES IN FIRST EPISODE STUDIES

E. Joyce

No abstract was available at the time of printing.

S05.02

CHARCTERISATION OF THE MEMORY DEFECTS: ACCESS OR VERSUS STORE DISORDER

T.K. Kondel

No abstract was available at the time of printing.

S05.03

PROBING SEMANTIC MEMORY IN SCHIZOPHRENIA

A. David

No abstract was available at the time of printing.

S05.04

EFFECT OF A SUBANESTHETIC DOSE OF KETAMINE ON MEMORY AND AWARENESS IN HEALTHY VOLUNTEERS

L.A.B. Hetem[1]*, J.M. Danion[2]. [1]*Faculdade de Medicina, Universidade de São Paulo, Ribeirão Preto, Brazil*
[2]*INSERM Unité 405, Strasbourg, France*

Background: Ketamine is an NMDA receptor antagonist with psychotogenic and cognitive effects in healthy volunteers and schizophrenic patients which has been proposed to be an useful tool to investigate neurobiological basis of schizophrenia. The present study characterized the effects of a subanesthetic dose of ketamine on memory and related subjective states of awareness in healthy volunteers.

Methods: Twenty-six subjects were given either a 60-minute ketamine (0.5 mg/kg/hour) or a placebo infusion. To obtain constant plasma ketamine throughout the experiment, ketamine was administered using a computer-assisted infusion. Subjects carried out episodic memory tasks involving words presented before and during infusion. Memory performance was assessed with recognition and free recall tasks. Subjective states of awareness were assessed using an experiential approach. Levels of psychopathology were evaluated with BPRS.

Results: Ketamine impaired performance in free recall and recognition of words presented during, but not before, infusion. There were no differences between groups concerning states of awareness associated with recognition memory. Subjects under ketamine had higher BPRS total scores as well as BPRS negative and positive clusters scores than control subjects.

Conclusions: Ketamine decreases episodic memory performance by impairing encoding, but not retrieval processes. It does not selectively impair subjective states of awareness associated with recognition memory as it has been seen in patients with schizophrenia. Ketamine might mimic the memory impairment associated with acute, but not chronic, forms of schizophrenia.

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