

P03-98

EFFECTS OF ANTIPSYCHOTICS ON COGNITIVE FUNCTIONS: AN ERP STUDY IN HEALTHY CONTROLS

A. Mucci, S. Galderisi, A. Vignapiano, D. Russo, P. Romano, G. Plescia, M. Maj

Department of Psychiatry, University of Naples SUN, Naples, Italy

Introduction: Clinical studies on cognitive effects of second generation antipsychotics produced disappointing findings probably due to the heterogeneity of the clinical populations under investigation, as well as to poor sensitivity of neurocognitive indices. Event-Related Potentials (ERPs) provide a functional measure of electrical brain activity time-locked to discrete stages of information processing. They have been widely used as putative biological markers of cognitive abnormalities in schizophrenia and represent useful indices in the investigation of the cognitive effects of psychotropic drugs.

Objectives: The present study investigated the effect of risperidone, haloperidol and placebo on N1 and P3 in male healthy subjects.

Methods: ERPs were recorded during a three-tone oddball task in which target, standard and rare-nontarget tones were randomly presented. Subjects had to press a button when hearing a target tone. Amplitude and topography of the ERP component maps at peak latencies were compared across conditions. If a significant drug effect was obtained, changes in the cortical sources of the corresponding ERP component were analyzed using Low-Resolution Electromagnetic Tomography (LORETA).

Results: The amplitude of N1 for attended stimuli and of P3 for rare-nontargets (P3a) was significantly increased only by risperidone. No significant change was observed in overall topographic features and in LORETA cortical sources of the same components. No significant drug effect was demonstrated for the latency of all the investigated components and for P3b amplitude.

Conclusions: Our findings suggest that risperidone has a favorable effect on early attention processes and automatic attention allocation.