

with typical neuroleptics, and 25 healthy controls (age 20–59, mean 30.6; 11 female) were included.

Schizophrenia patients exhibited significantly lower S1-S2 differences compared to healthy controls (Fz:  $p=0.03$ ). This reduction was mainly due to the subsample of schizophrenia patients treated with typical neuroleptics (compared to controls: C4, Fz:  $p=0.014$ ; Cz:  $p=0.082$ ; compared to never medicated patients: C4:  $p=0.052$ ; Cz:  $P=0.09$ ).

These results indicate that neuroleptic medication contributes to the reduction of the S1-S2 difference of P50 amplitudes in schizophrenia patients. Further research is necessary to clarify different influences of psychopathology and medication on P50 amplitudes.

#### A.285. METAPHOR COMPREHENSION IN PATIENTS WITH SCHIZOPHRENIA: AN EVENT-RELATED POTENTIAL STUDY

C. Passerieux, G. Iakimova, J.P. Laurent, M.-C. Hardy-Baylé

Deficit in the use of linguistic context in thought disordered schizophrenic patients is supposed to explain their difficulties in metaphor comprehension. Event-related potentials (ERPs) were recorded for schizophrenic patients ( $N=10$ ) and normal controls ( $N=13$ ) during metaphor recognition task involving judgements of the meaningfulness of metaphorical (e.g., «This job is in his pocket»), literal (e.g., «He's reading a book») and nonsense (e.g., «The church is built on the gloves») sentences. In order to evaluate the role of the contextual constraints on the literal and metaphoric processing, half of the sentences (literal and metaphorical) had strong contextual constraints (the last word is highly predictable) and half of them had low contextual constraints (the last word was weakly predictable). The last word of weakly structured sentences (metaphorical or literal) elicited larger N400 components than did the last word of highly structured sentences (metaphorical or literal). This effect was observed in the two groups (schizophrenics and controls), thus suggesting that N400 abnormalities in schizophrenics are functional and can be reduced by the enhancement of the contextual constraints. Furthermore, the last word of literal sentences elicited larger N400 components than did the last word of metaphorical sentences in both groups of subjects (schizophrenic and controls). This result suggests that the non-literal meaning of metaphors is generated directly and automatically whenever a coherent interpretation can be formed in the current context of the sentence. The qualities of the metaphorical context, especially the metaphor's aptness, might be able to facilitate access to metaphorical meaning when compared to access to the literal meaning. Finally, the absence of any differences in the electrophysiological patterns between the two groups of subjects provides evidence for the absence of specific abnormalities in the comprehension of the metaphor by schizophrenic patients in this experimental task.

#### A.286. N100 IN MEDICATED AND UNMEDICATED PATIENTS WITH SCHIZOPHRENIA

S. Ruhrmann, A. Brockhaus, I. Tendolkar, K. Flatow, R. Pukrop, J. Klosterkoetter

*Department of Psychiatry and Psychotherapy, University of Cologne, Joseph-Stelzmann-Str. 9, 50924 Cologne, FRG*

N100, an auditory event related potential appearing about 100 ms after an acoustic stimulus, was investigated in healthy controls ( $n=39$ ), medicated ( $n=24$ ) and unmedicated ( $n=25$ ) schizophrenia patients. N100 was studied twice, during a no attention condition and during an attention condition of an auditory odd-ball paradigm. The potential was acquired for central electrodes (Cz, C3, C4). Schizophrenia patients showed a lower N100 amplitude than healthy controls during both conditions and for all three electrode sites. Comparisons between the two schizophrenia subgroups and the controls revealed analogue results, whereas there was no significant difference between medicated and unmedicated patients. None of the comparisons mentioned above showed any significant differences between N100 latencies.

These results show that the decrease of the N100 amplitude in schizophrenia patients is not significantly influenced by medication. Thus, it can be assumed that this decrease has a very close association with the illness itself and it seems to be a robust parameter to discriminate between schizophrenia patients and healthy controls.

#### A.287. LATE COMPONENT ERPs ARE ASSOCIATED WITH THREE SYNDROMES IN SCHIZOPHRENIA

K.J. Brown<sup>1,2</sup>, L.M. Williams<sup>1,3</sup>, E. Gordon<sup>1,3</sup>, J. Wright<sup>4</sup>, H. Bahramali<sup>1,3</sup>

<sup>1</sup>Brain Dynamics Centre, Department of Psychological Medicine, Westmead Hospital, Westmead NSW 2145, Australia; <sup>2</sup>University of Wollongong, <sup>3</sup>University of Sydney, <sup>4</sup>Brain Dynamics Laboratory, Mental Health Research Institute of Victoria

Previous studies have revealed various abnormalities in late-component ERP and amplitude and latency in schizophrenia, considered as a diagnostic category. The aim of this study was to investigate the within-sample associations between late-component ERPs and three primary syndromes of schizophrenia — Reality Distortion, Psychomotor Poverty and Disorganisation.

Subjects included 40 schizophrenics and 40 age and sex matched nonpsychiatric controls. Auditory ERPs (N100, N200, P200, P300) were elicited using an auditory oddball paradigm. Between-group analyses of target data showed reduced N100,