Relationship Between LNNB Scale Scores and Chlopromazine Equivalents in Acute Schizophrenia

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Presented at the Sixth Annual Meeting of the National Academy of Neuropsychologists on Monday, October 27, 1986 in Las Vegas, Nevada.

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The role of neuroleptics on neuropsychological performance has not been well understood. In part, this lack of understanding is due to the limited number of studies as well as problems of subject selection in the existing studies. For example, in the Killian, Holzman, Davis and Gibbons (1984) and Puente, Tune, Orell and Hendrickson (1986), only chronic schizophrenics were used.

In the present study, a sample of 30 inpatient schizophrenics (not clinical subjects) were diagnosed independently by a psychiatrist and psychologist and volunteered for the study. However, since all patients were actively psychotic (e.g., hallucinating) only 10 were able to complete the entire study. Subjects were drawn from a population of non-brain damaged schizophrenics recently admitted to a receiving facility (local 500-bed general hospital). All subjects were right-handed, had at least a sixth grade education, had good corrected or uncorrected vision, and were able to read, understand, and sign a consent form. There were 7 males and 3 females, 7 whites and 3 blacks with an average education level 11.7 and age of 33.7. The average number of days of medication administration prior to testing was 8.01 and the average drug dose in chlorpromazine equivalents was [illegible] mg. Subjects were tested by a research assistant who was trained in neuropsychological assessment but was [illegible] blind to diagnosis.

Neuroleptic dosages of each subject were converted to chlopromazine equivalents (CPZE) according to the conversion formula of Davis (1976). Each subject was individually administered Form 1 of the Luria-Nebraska Neuropsychological Battery (Golden, Hammeke, & Purisch, 1980) in an isolated room on the ward on Saturday morning after their first but before their second dose of medication.

Pearson's r correlations between CPZ-E and T scores of each of the 16 major LNNB scales did not reveal any significant (.01) relationships. These findings extend earlier results indicative of a lack of relationship between neuroleptic dose and neuropsychological performance with the use of an acute, activiely psychotic (and difficult to test) sample of non-brain-damaged schizophrenics. Additionally, the results indicate that all subjects exhibited scores on the average 18.94 T points above critical level for each of the 16 scales. Whether this is indicative of neuropsychological deficits directly attributable to the schizophrenic syndrome or to the neuroleptics is not known. Further studies need to be conducted examining the relationship of neuroleptic blood serum and not dose levels with neuropsychological performance prior to arriving at a better understanding of neuropsychological deficits in schizophrenia.