

Oral presentation

## Predictors of agitation and assault in inpatient psychiatry services

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A detailed evaluation of correlates of inpatient dangerous behavior in a schizophrenic population is presented. Potential correlates included: neuroleptic serum levels, admission schizophrenic symptoms on the Brief Psychiatric Rating Scale (BPRS), act leading to admission, military experience, and childhood discipline. The following reports a summary of finding of the study that was carried out over a five-year period.

The study was conducted on the Psychiatric Intensive Care Unit of the Veterans Administration Medical Center, Palo Alto, California. Data were collected on 70 male patients over a three-year period. Patients' mean age was 32 years. Analysis of ethnic background indicated that 80% were white, 11% were Black, 3% Asian, and 6% of other races. All patients were interviewed by two board-certified psychiatrists and met DSM III criteria for schizophrenia. Data collected included dependent measures of dangerous acts committed on the inpatient unit, neuroleptic serum levels, and psychometric and questionnaire information gathered during a comprehensive interview. Serum level, psychometric, and dependent measures were obtained for the same one-week period immediately following admission.

Instances of assault-related behavior on the ward were recorded for the day of admission and for seven successive days. A rating scale was utilized to record the number of days on which danger-related behaviors occurred during this eight-day period. Rated behavior included episodes of physical assault against other patients or staff, verbal assaults against other patients or staff, days in which seclusion and four-point restraints were required to protect others, and a summary score for the total number of any danger-related event. Surveys on this acute service indicate that 15% of the subjects commit at least one physical assault and that 60% commit at least one danger-related

behavior. Nursing staff are required to chart such incidents on all shifts and to list these in summary reports. Inter-rater reliability was assessed in 34 subjects and found to be greater than 0.60 on all measures by intra-class correlation.

A multiple regression analysis indicated that the best correlate of inpatient physical assaults, verbal assaults, and total number of inpatient dangerous acts in our population was low neuroleptic serum levels. The best predictor of seclusion and restraint was severity of Vietnam combat. Additional significant correlates included degree of schizophrenic symptoms on the BPRS and history of violence prior to admission. Three factors: neuroleptic serum level, degree of schizophrenic symptoms, and violence prior to admission accounted for 49% of the sample variance for inpatient assaults.

This study was conducted several years ago with the "typical" neuroleptic thiothixene using both single-dose and steady-state serum levels. Current use of the newer "atypical" neuroleptics does not stress basic pharmacokinetic parameters as a predictor of response probably because of the lack of side-effects with the "atypical" neuroleptics. Nonetheless, careful management of timing and dosage of neuroleptics is likely to result in better management of assaultive behavior in acutely psychotic patients. This pharmacologic factor, plus factors such as the severity of admission psychotic symptoms as well history of prior violence and stress will likely always remain crucial in predicting future violence in acutely psychotic patients.