DIFFERENTIAL EFFECTS OF CHLORPROMAZINE AND RESERPINE*

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Chlorpromazine and reserpine have been the two most widely utilized ataractic drugs in the treatment of schizophrenic patients. Numerous clinical, but few experimental, comparisons have been made as to their differential effectiveness. The following study was designed to compare the actions of these drugs with respect to behavior alteration and to changes in cognitive functioning as measured by psychological tests over a period of six months.

METHOD

Forty-eight chronic schizophrenic patients were randomly chosen from a larger pool of patients on a single ward. They had not previously received ataractic medication. These patients ranged from fair to poor reality contact and were from 24 to 60 years old, with a median age of 36. The 48 patients were then randomly divided into two groups of 24 subjects each, one group to receive chlorpromazine and the other, reserpine. Dosages were not uniform, but were to be what the ward psychiatrist considered optimum for each patient. Administration of reserpine was in tablets of 1, 2 or 4 mg.; and chlorpromazine was in capsules of 50 and 100 mg. The actual reserpine dosage varied from 2 to 10 mg. daily, the majority of reserpine subjects receiving 4 to 5 mg. a day. Chlorpromazine dosage varied from 200 to 800 mg. daily, the modal prescription being 300 to 400 mg. a day. No placebos were employed, since this was a comparative study and did not attempt to determine the absolute efficacy of the two drugs.

Subjects within each group were continued on their respective medications for three months, following which, half of the patients in each drug group were randomly switched to the other medication, while the remaining subjects continued their original medication.** This second phase lasted an additional three months.

All subjects were evaluated before medication and again

*From the Veterans Administration Hospital, Battle Creek, Mich. The chlorpromazine for this study was supplied as thorazine by Smith, Kline and French Laboratories, Philadelphia.

**Chlorpromazine and reserpine subjects switched to the other drug will be referred to as CR and RC groups, respectively.
monthly by means of an abridged Lorr "Multidimensional Scale for Rating Psychiatric Patients." This contained 25 scales, which were obtained by excluding subscales with the lowest factor loadings on the 11 multidimensional factors characterizing the Lorr scale. Independent ratings based on diagnostic interviews were also obtained. These interviews were conducted by five teams, each composed of a psychiatrist and a clinical psychologist. Patients were randomly assigned to the various teams in approximately equal numbers, and were interviewed by the same teams during the course of the study. Ward behavior was rated by supervisory aides of two different duty shifts so that both day and night behavior of patients contributed to these evaluations. Each rater of a team contributed independent appraisals. No rater was aware of the specific medication a patient was receiving.

Judges' ratings were either identical or deviated one scale point in 83 per cent of all ratings, and these results were interpreted as indicating acceptable reliability for this study. The combined ratings of the two interview judges and those of the two supervisory aides were utilized in the analysis as probably representing the most valid descriptions of patients that were obtainable. Subjects were tested before the initiation of drugs, at the end of three months (before medication switches) and at the end of six months—by the information, similarities, block design and digit symbol subtests of the Wechsler-Bellevue Intelligence Scale, and by various subtests of the Wechsler Memory Scale.

It was proposed (a) to determine whether one drug had a greater effect than the other on both behavior and cognitive functioning; (b) to determine trends in behavioral changes over the six-month duration of the study, e.g., to find out whether indicated changes in behavior were initiated early and continued at a regular rate, or were delayed and occurred after an initial drug intake build-up; (c) to determine the average rate of behavioral change occurring for subjects in each of the two drug groups; and (d) to determine the effects of switching medication after an initial three-month trial period.

Various analyses involving analyses of variance for repeated measurements of the same subjects—t tests, chi square procedures, Fisher's exact test, and determinations of trends and their significance—were employed.