THE EFFECTS OF MESCALINE SULFATE IN CHRONIC SCHIZOPHRENIA

SIDNEY MERLIS, M.D.

The present study was undertaken to determine the use and effectiveness of mescaline sulfate in chronic schizophrenic patients, as part of a general program evaluating the therapeutic use of this agent in psychiatry. Hoch, Cattell and Pennes (1), Cattell (2), Hoch (3), Denber and Merlis (4) have reached various conclusions regarding this mode of treatment. Denber and Merlis (5) indicated that mescaline-chlorpromazine was clinically effective in 25 of 40 acutely ill schizophrenics. Seven of 17 chronically ill patients showed equivocal improvement (5). The present report is an extension of the latter investigation utilizing increasing amounts of mescaline. It was felt that chronic patients might possibly respond to higher doses.

Materials and Methods

Twenty-four female patients, ranging in age from 29 to 58, were studied (table 1). All were schizophrenics and distributed through four major diagnostic categories (table 2). The duration of illness varied from 16 months to 14 years (table 3). All patients were in the hospital at least one year prior to this study, and were selected at random.

TABLE 1.—Age

29–39 years	7
39–49 years	12
49–58 years	5

TABLE 2.—Clinical Diagnosis

	Chronic
Dementia Praecox, paranoid	9
Dementia Praecox, catatonic	6
Dementia Praecox, hebephrenic	8
Dementia Praecox, simple	1

TABLE 3.—Duration of Illness Before Admission

Time	Chronic
1–5 years	11
6–10 years	7
11–14 years	6

Method

All medication, including sedation, was discontinued for 24 hours prior to the study. Breakfast was withheld from the patient on the morning of the test. The study was conducted in a quiet, well lit, pleasant room. Mescaline sulfate (0.50 grams to 0.75 grams diluted in 20 cc. of saline) was injected intravenously. Pulse and blood pressure recordings were determined during the period of injection but discontinued afterwards. The patients were questioned at intervals during four to six hours after the injection. No interpretations were made of the material elicited. No leading questions were asked. The patients were observed until the effects of mescaline had disappeared and were then returned to their wards. A total of 34 experiments were done with 24 patients. Ten patients had two sessions; the first with 0.50 grams of mescaline, and the second with 0.75 grams of mescaline.

Results

The effects of mescaline sulfate, such as accelerated pulse rate, flushing of the face, variable blood pressure changes and pupillary dilatation, were essentially as reported before and not significantly different from those seen in patients with short-term schizophrenic illnesses. A symptom profile was used similar to that reported previously (5) and is noted in Chart I.

The injection of mescaline sulfate served to bring forth and reflect the patient's basic personality structure; a fact we have noted before (5). It is of interest that a higher dose did not yield any significant changes in psychodynamic material. Three-quarters of a gram of mescaline produced an aggravation and accentuation of the reaction pattern elicited at the lower level (0.50 grams), but little or no new material or significant change of behavior was seen. Furthermore, once the patient had established himself in one of the categories of

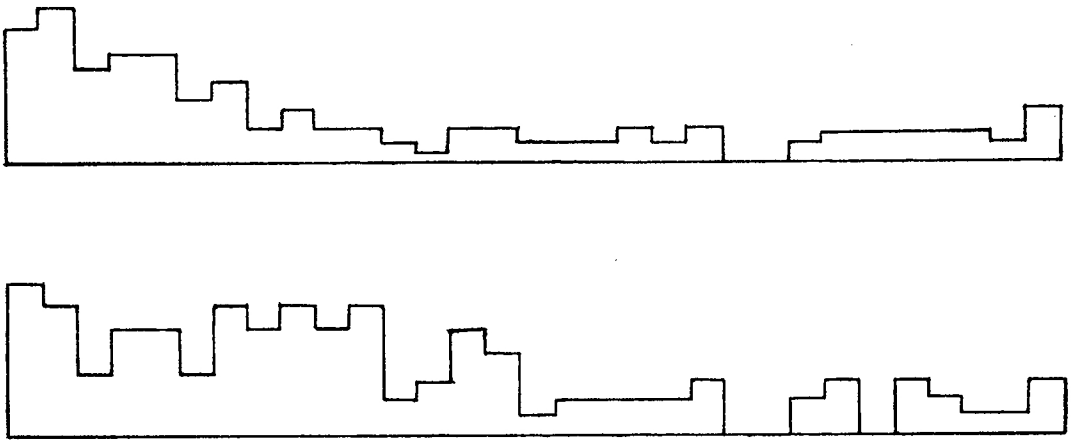

CHART I. (Data available in 24 patients). Profile of symptoms shown by chronic patients. There is little change in the profile between the pre-and post-mescaline periods.

Key:

1—Tension	11—Inappropriateness	21—Fatigue
2—Anxiety	12—Euphoria	22—Echolalia
3—Panic	13—Silliness	23—Echopraxia
4—Uneasiness	14—Delusions	24—Stereotypy
5—Restlessness	15—Hallucinations	25—Lethargy
6—Mutism	16—Nihilism	26—Somnolence
7—Antagonism	17—Grandeur	27—Irrelevant
8—Negativism	18—Unreality	28—Incoherent
9—Suspicion	19—Depersonalization	29—Flighty
10—Hostility	20—Bizarreness	30—Neologisms
		31—Sexual material

responsiveness with 0.50 grams, a second injection of 0.75 grams did not alter the basic reactions. In general, the responses of all 24 patients could be placed in two distinct categories by describing their individual reaction patterns:

1) Seven patients experienced marked anxiety, apprehension, increased psychomotor activity and intensification of the hallucinations and delusional thinking. There was increased irrelevancy, flight of ideas, neologisms and marked out-pouring of sexual material. These patients frequently became amorous, demanding, used provocative phrases and developed a generally seductive attitude. The intensification of these reactions in one patient became so great that 22.5 grains of sodium amytal were required to sedate her. Feelings of hostility, aggressiveness and a tendency to vilification of personnel and patients were seen as well.

2) Seventeen patients developed all of the major physiological responses and became conscious of inner feelings of tension and uneasiness. But there were practically no overt emotional discharges. They frequently accepted the injection in a docile cooperative manner. After four hours, they still showed no response. Three of these patients insisted upon getting up and leaving the examining room to return to their wards after the injection. They seemed to be frightened of the experimental situation. They did not show evidence of hostile, aggressive or sexual activity at any time. There was a marked paucity of material elicited from these patients.

It has been our experience that the responsiveness in verbalization of dynamically significant material seemed much more prominent in female than in male schizophrenic patients.

Following the mescaline-induced experience, only one of the entire group of 24 patients exhibited any significant change in her clinical picture. Her reaction pattern was in the first group. She appeared more controlled, somewhat more integrated in her thinking, and was

shortly thereafter able to return home where she remains at this writing. Of the remaining 23 patients, five in the first group and two in the second group had a partial temporary improvement. However, within four to six weeks, they again returned to their pre-mescaline state.

Discussion

The significance of the mescaline-induced state as a therapeutic tool in chronic schizophrenic patients appears to be minimal. Long-term chronically ill schizophrenics do not benefit from large doses of mescaline. Psychodynamic material cannot be obtained in a large percentage of these individuals. The basic personality structure comes to the surface under the influence of mescaline but apparently cannot be handled in a therapeutic fashion for the eventual clinical improvement of the patient. It appears that in chronic schizophrenia, at least, the induction of anxiety by intravenous mescaline is not in itself sufficient to produce any results leading toward a significant relief of symptoms.

Conclusion

1. Twenty-four chronic schizophrenic patients were studied in an effort to determine the clinical effectiveness of mescaline sulfate as a therapeutic agent. Doses varying from 0.50 grams to 0.75 grams were given in 34 experiments to 24 patients.

2. Two significant reaction patterns were noted.

3. One patient showed sufficient clinical improvement and was discharged. Seven patients were temporarily improved, 16 showed no change.

4. It is felt that mescaline sulfate does not appear to be clinically effective as a therapeutic agent in chronic schizophrenic patients.

BIBLIOGRAPHY

1. Hoch, P. H., Cattell, J. P., and Pennes, H. H.: Effects of mescaline and lysergic acid (d-LSD-25). *Am. J. Psychiat., 108:* 579–584, 1952.
2. Cattell, J. P.: The influence of mescaline on psychodynamic material. *J. Ment. & Nerv. Dis., 119:* 233–244, 1954.
3. Hoch, P. H.: Experimental psychiatry. *Am. J. Psychiat., 3:* 787–790, 1955.
4. Denber, H. C. B., and Merlis, S.: A note on some therapeutic implications of the mescaline-induced state. *Psychiatric Quart., 28:* 635–640, 1954.
5. Denber, H. C. B., and Merlis, S.: Studies on mescaline. VI. Therapeutic aspects of the mescaline-chlorpromazine combination. *J. Nerv. & Ment. Dis., 122:* 463–469, 1955.

Central Islip State Hospital
Central Islip, New York

THE RESOLUTION AND SUBSEQUENT REMOBILIZATION OF RESISTANCE BY LSD IN PSYCHOTHERAPY

CHARLES SAVAGE, M.D.

At the American Psychiatric Association meetings on mescaline back in 1932, Sullivan stressed that in psychotherapy a drug can be therapeutic only by altering the relationship between the patient and the doctor. By establishing a changed relationship with the doctor, the patient has the possibility of changing his relationship to other people in a manner which is more satisfying to him. If mescaline and LSD act therapeutically, they do so by favorably altering a relationship. But let us remember that while a relationship may be altered in a favorable direction, it is not necessarily permanent. The direction can always be reversed, particularly if the relationship moves too fast.

Do mescaline and LSD move the relationship too fast? I recall a paranoid alcoholic treated in 1949, a burly brute of a man with great popping eyes. He was so guarded that he would not even admit to drinking. During the third mescaline interview (250 mg.), he talked with me for four hours. He relived the shame and agony of his mother's death and shed many tears. It was as though a stone had suddenly wept. He also related that everything he had been telling me for the past three months was a mass of ingeniously constructed