Dis.nerv.Syst. 27, 511-514 (1966).

Lysergide in the Treatment of Neurosis

(A Report of Two Cases)

R. DENSON, M.D.

The value of lysergide in the treatment of alcoholism and neurosis has been the subject of numerous papers[1-9] in the past decade and many investigators have been impressed by its therapeutic possibilities. In spite of these favourable reports, the use of lysergide as an aid to psychotherapy has been neglected in North America and the restrictions now imposed by the federal authorities and the manufacturer of the drug are conducive to a further diminution of interest. Evidence that the illicit use of lysergide is widespread and increasing has created a hysterical atmosphere in which the therapeutic potential of this drug in the legitimate practice of psychiatry may be entirely obscured and forgotten.

Maurer and Vogel[10] have pointed out that the common attitude on this continent towards drugs which modify consciousness has been irrational and ethnocentric. Slotkin[11] notes that the ingestion of the mescal bean was condemned without investigation, and that this condemnation was supplemented by a prolonged but unsuccessful search for evidence of concomitant debauchery and "mescal wrecks". Similar views seem to have prejudiced the medical assessment of lysergide. Favourable evaluations have been rejected or countered by a demand for double-blind studies,[12] although deliberate reflection and experimental evidence[13-15] show that such procedures are impossible with hallucinogens. Nevertheless, when the prevailing symptoms have been aggravated or new ones have developed after the administration of lysergide, the existence of a causal nexus has been assumed to be entirely self-evident and to require no further proof.[16-20] Controlled trials, posited as a solution for this difficulty,[21] are unlikely to have much effect. The results, if favourable, can be ignored or easily discounted, on the grounds that those who undertake extensive studies with hallucinogens must be guided by preconceived notions which may have influenced the conduct of the trials or the formulation of conclusions. Furthermore, most psychiatrists clearly have no intention to use the drug under any circumstances and lack motivation for a close inspection of the evidence.

In this situation, the reporting of striking experiences by those of us who have treated addicts and disordered personalities with lysergide and have lost some of our initial scepticism in doing so, may be of some value. Since the hallucinogens are likely to be retained in the psychiatric pharmacopeia only if they possess unique therapeutic properties, instances in which these drugs appeared to produce a successful outcome after all other reasonable methods had failed are of particular interest. The two case histories which follow have been selected with these criteria in mind. They are remarkable because of the severity and chronicity of the illnesses, and the excellence of the recovery, which has been maintained up to the date of this communication, for periods of 24 months and 20 months respectively.

Case 1:

Mrs. B.P., a 24-year-old mother of two children in the last trimester of her fourth pregnancy, was admitted to the psychiatric ward in November 1963. She was in a state of agitated depression and had been treated for five weeks in her local hospital without success. The family doctor wrote: "She has been depressed for at least two years, but the features of agitation did not develop until two months ago". The patient, a tall and myopic young woman, was pale, tremulous, and unhappy. She spoke continually of her unworthiness and inferiority, comparing herself unfavourably with her husband and emphasizing

From the University of Saskatchewan, Medical School and Saskatchewan Department of Public Health.

her distressing inability to care for her children or to feel any affection for them.

Treatment was started with imipramine 25 mg. t.i.d., the case having been tentatively diagnosed as manic-depressive psychosis. A suicide attempt one week later prompted the application of electrotherapy and seven modified electrical treatments produced some improvement. One week after the last treatment the patient gave birth to a healthy female child, but at two days post partum she was again depressed and agitated. The response to a further course of seven electrical treatments and to three weeks on amitriptyline 50 mg. t.i.d. was negligible. At this point it had become clear that the patient was suffering from a profound disorder of personality; whenever her depression diminished in severity, there was a corresponding exacerbation of her anxiety, tension and trepidation. Under barbiturate narcosis the patient admitted that she felt responsible for the death of her young brother, her junior by nearly eight years, who had died from the effects of chronic renal disease when she was 12, but a further seven narcoanalytic sessions elicited no rationale for this conviction. After six months of treatment on the psychiatric ward, she remained intractably depressed, agitated, and suicidal. As a last resort, she was given a series of LSD experiences, which would be followed by committal to the provincial institution if she did not improve.

On three occasions, at intervals of one week, the patient took 200 microgram doses of lysergide by mouth and underwent LSD experiences in the company of a nurse, who made notes throughout the sessions. During the second of these experiences the patient revealed that she had been raped at the age of eleven while bringing milk from a neighboring farm. "I just cried and cried and couldn't seem to stop. I was so ashamed that I felt I should crawl into a hole. He said: "Just wait. If you tell I'll make you the sorriest girl in town". I felt so dirty and guilty as if I couldn't get clean again. I knew that God must despise the ground I walked on ever to let it happen". Shortly after this devastating shock, which was never communicated to her parents, the patient's five-year-old brother, whom she had nursed since his infancy, died in hospital. She added. "I knew that his death must be a punishment for what I had done". Some six months later, after her discharge from the hospital, the patient was asked why she had never mentioned this incident before, when she had been questioned directly about the possibility of sexual assault, or in the numerous psychotherapeutic interviews. She replied: "The memory used to return periodically, but in a way I seem to have persuaded myself that it had happened to somebody else." (This may be compared with the similar statement about a repressed idea which was made by Freud's patient, Miss Lucy R. "I didn't know — or rather I didn't want to know. I wanted to drive it out of my head and not think of it again; and I believe that latterly I have succeeded". Commenting on this in a footnote, Freud added: "I have never managed to give a better description than this of the strange state of mind in which one knows and does not know a thing at the same time."[22])

After the three LSD experiences, which were supplemented by interviews in which the new material was discussed to promote assimilation into the self-concept, rapid mental and physical improvement was noted. Menstruation, which had not returned after the birth of her third child six months before, recommenced on the day after the last LSD experience and ten days later we were able to discharge her in good spirits. She has now remained completely well for two years without any further psychiatric treatment and her husband confirms that she is showing greater energy, efficiency and strength of character than at any previous time.

Case 2:

Mrs. C.M., a 48-year-old woman, the mother of two sons, first received psychiatric treatment in February 1961, when she complained of inability to sleep, work, or concentrate, of anxiety with palpitations, of loss of appetite, and diarrhea. In the provincial mental hospital her illness was diagnosed as Involutional Psychotic Reaction #302 and she received ten unmodified electrical treatments in combination with tranylcypromine and levomepromazine. She was discharged after four weeks of treatment, but her improvement was shortlived and during the three years which followed she required continuous outpatient therapy for depression and anxiety. A wide range of drugs was used, with limited success, the best results being obtained with a combination of tranylcypromine and chlordiazepoxide. In February 1964 the patient read in a local paper that tranylcypromine had produced "strokes" in certain individuals and was being withdrawn from the market. This news threw her into a state of continuous panic, complicated by severe claustrophobia, which did not respond to medication. After three months without improvement she was admitted for further investigation.

She presented as a tall, well-proportioned dark-haired woman, free from physical abnormalities. Her principal symptoms can be listed as follows:

(1) Inability to remain alone in a room, to walk by herself, or to travel by public transport. She said: "I can't stand being closed in. I'm always afraid that someone is going to grab me".

(2) A sensation of pressure on the head and chest, with inability to take a deep breath.

(3) A very acute fear of electrotherapy and of being transferred to the provincial mental hospital.

(4) Inability to lie flat; since receiving electrotherapy she had never been able to extend her neck while she was lying in bed and had always slept with two pillows under her head.

(5) A recurrent idea that she might harm somebody with a knife.

(6) A fear of death and dying, of "strokes" and of "going out of my mind". She said: "I'm always afraid that something is going to happen to me".

(7) A fear of "new drugs" and especially of tranylcypromine. She repeatedly recalled the

utter horror she had experienced when she had read that this drug might produce "strokes".

(8) A feeling of weakness in her hands, especially the right hand, which could not be used to grasp a knife or scissors.

Since nothing in the patient's environment or known background explained the origins of this phobic anxiety, the writer decided to give her a series of interviews under Sodium Amytal/Methedrine narcosis to fill in the details of her early life. After the second interview the patient, who had previously denied a history of sexual assault, revealed that she had been raped on four or five occasions by a close relative, who had locked the barn doors and threatened her with a loaded shotgun. She remembered hiding a knife in a horse stall with the intention of defending herself and being afraid to use it. She emphasized the state of continuous fear in which she had lived for more than a year, and her inability to confide in anyone or find a protector, since her stepfather had been killed in an accident and her mother was a bed-ridden invalid.

These memories, repressed since adolescence, provided a plausible explanation of the origin of the first five symptoms, some of which seemed to be partial recollections of the traumatic incidents, while others were panic reactions to objects or situations which might remind the patient of these painful events. Electrotherapy clearly symbolized rape, and the patient stated that she had seen a patient "being dragged" to the treatment unit in the mental hospital. Why the patient had reacted so dramatically to the news about tranylcypromine remained obscure and was not clarified by a further five Sodium Amytal/Methedrine interviews, none of which produced new information.

At this point the patient was discharged at her own request, but her attempt to resume normal life was entirely unsuccessful and she was re-admitted in a state of extreme agitation. As a last resort she was given LSD treatment, the only practicable alternative being a return to the mental hospital.

She received six LSD experiences in all, the quantities employed being 25, 40, 75, 50, 75 and 100 micrograms. During the fourth experience she began to complain of numbness in her right arm and a burning sensation in the right side of her head. She said: "The whole right side feels funny; it's lower than the other side". Thirty minutes later she added: "The hand feels paralyzed. There was nothing wrong they always said." She became certain that her arm was shrinking and said, in great fear and agitation; "I'm going to have a stroke and die. That's what's wrong with my right side. Everyone is lying to me. Those pills, they were killing people. The news said people were having strokes and dying. I'm going to have a stroke and I'm home alone. My husband's working nights and there's no one to help". After this outburst she relaxed a little and said: "I had a brother who shot himself. I didn't care because he had mistreated me. He was using me just like the other one". When the writer pointed out that she had never mentioned this before during months and even years of therapy, she replied: "I never thought of it before. The sore hand reminded me of it. They'll have the records in the other hospital".

The record in question is disappointingly brief, but does provide some verification of her story. It states that she was hospitalized from the end of May to the middle of July, 1934, at the age of eighteen, and that she was treated for arthritis of the wrist. Subsequently she explained that under threats of physical violence she had entered into an incestuous relationship with her brother at the age of sixteen. As she grew older, she felt more and more guilty about this illicit gratification, but yet unable to terminate the connection. She attempted to run away from the farm, but was brought back and severely beaten. Soon afterwards she felt pain in her right hand while she was milking and the soreness increased until she lost the use of the whole arm, which became stiff and contorted. She said: "I thought it was God's punishment for what I had been doing. I thought I was going to shrivel up and die". Her brothers were compelled to call the doctor and she was taken to the hospital where the limb was straightened out forcibly and immobilized in a plaster cast. After her discharge she returned to the farm, but the incestuous relationship was terminated by the illness. She said: "He was never able to touch me after that because my arm was so sore".

Having remembered these events the patient was quick to understand their pathogenic significance and to ask the question: "Is that why I was so afraid when I read that the drug had caused strokes?" She made a slow recovery during the following eight weeks and at the date of this communication she has been symptom-free for nearly two years.

Discussion

In a recent evaluation of abreaction technique with LSD and intravenous Cyclonal/Methedrine[23], Robinson and colleagues found that the therapeutic results in 87 patients were not significantly better than those produced by "standard" psychotherapy. On the other hand, Levey, Smith and McKerracher in their follow-up study of 100 non-schizophrenic psychiatric patients[24] found clear indications that patients who had received psychotherapy with Sodium Amytal were subjectively better than those who had been treated without recourse to this technique. These differences in outcome may be a consequence of non-drug variables such as the skill of the therapist, the time he has available for the individual patient, and his enthusiasm for the methods at his disposal.

Horsley, in his monograph on narcoanalysis[25], gave consideration to the possible use of mescaline as an alternative to intravenous barbiturates. He rejected it on the grounds that it caused "such confusion and clouding of consciousness as to prevent the accurate evaluation of the patient's responses". Certainly it is true that many patients are, by and large, inaccessible to questioning when they are deeply immersed in an LSD experience; but this may be compensated by a spontaneous breakdown of repression which makes interrogation unnecessary. Spencer's observations in group therapy[9] and Robinson's statement that "the experiencing of earlier traumatic experiences in infancy or childhood. . . .occurred only in patients treated with LSD",[23] lend support to this hypothesis, and agree with our own observations.

Conclusions

Sodium Amytal/Methedrine and Lysergide in the exploration of a case of neurotic illness can be compared crudely to a spade and a stick of explosive in a hunt for subterranean treasure. With the first, one can carry out a planned investigation over a large area; but the operation is time-consuming and tends to remain at a superficial level. With the second, there may be penetration to great depths; but the resultant upheaval is uncontrolled and whether the significant material is uncovered remains largely a matter of chance. Neither tool is entirely appropriate to our needs; but they are the best that we have and the writer feels strongly that both should play an important role in modern psychiatry.

The author wishes to acknowledge the cooperation of Dr. A. Hoffer, Director of Research, Dr. C. M. Smith, Deputy Director, in the treatment of these patients and the preparation of this manuscript.

REFERENCES

1. Baker, E.F.W.: *Canad. Med. Ass. J., 91;* 1200, 1964.
2. Fontana, A.E.: *Acta Neuropsiquiatrica Argentina, 7;* 94, 1961.
3. Jensen, S.E.: *Quart. J. Stud. Alcohol, 23;* 315, 1962.
4. Ling, T.M., Buckman, J.: *The Practitioner, 191* 201, 1963.
5. MacLean, J.R. et al: *Quart. J. Stud. Alcocol, 22;* 34, 1961.
6. Sandison, R.A. et al: *J. Ment. Sci., 100;* 491, 1954.
7. Smith, C.M.: *Quart. J. Stud. Alcohol, 19;* 406, 1958.
8. Smith, C.M.: *Quart. J. Stud. Alcohol, 20;* 292. 1959.
9. Spencer, A.M.: *Brit. J. Psychiat., 109;* 37. 1963.
10. Maurer, D.W., Vogel, F.H.: "Narcotics and Narcotic Addiction," Springfield, Illinois. *Thomas,* 1962.
11. Slotkin, J.S.: "The Peyote Religion," Glencoe, Illinois; *The Free Press,* 1956.
12. Smart, R.G., Storm, T.: *Quart. J. Stud. Alcohol, 25;* 333, 1964.
13. Cholden, L.S. et al: *J. Nerv. Ment. Dis. 122;* 211, 1955.
14. DeMaar, E.W.J. et al: *Clin. Pharmacol. Therap. 1;* 23, 1960.
15. Linton, H.B., Langs, R.J.: *Arch. Gen. Psychiat.* 6; 369, 1962.
16. Cohen, S., *J. Nerv. Ment. Dis. 130;* 30, 1960.
17. Cohen, S., Ditman, K.S.: *J.A.M.A. 181;* 161, 1962.
18. Cohen, S., Ditman, K.S., *Arch. Gen. Psychiat. 8;* 475, 1963.
19. Farnsworth, D.L.: *J.A.M.A. 185;* 878, 1963.
20. Rosenthal, S.H.: *Am. J. of Psychiat. 121;* 238, 1964.
21. Unger, S.M.: *Psychiatry, 26;* 111, 1963.
22. Breuer, J., Freud, S.: "Studies on Hysteria," New York; *Basic Books,* 1957.
23. Robinson, J.T. et al: *Brit. J. Psychiat. 109;* 46, 1963.
24. Levey, A.B., Smith, C.M., McKerracher, D.G.: A Follow-Up Study of Non-Schizophrenic Psychiatric Patients, Saskatoon, University of Saskatchewan Printing Services, 1964.
25. Horsley, J.S.: "Narcoanalysis," *Oxford University Press,* 1943.