Treatment of Alcoholism with Lysergide[1]

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SEVERAL IMPRESSIVE REPORTS (1, 2, 3) have suggested that a single treatment of alcoholics with lysergide (LSD, *d*-lysergic acid diethylamide) produces a substantial rate of recovery. The present study is an attempt to confirm this finding. MacLean et al. (1) at Hollywood Hospital, British Columbia, and Smith and his co-workers (2, 3) at the University of Saskatchewan, have worked with mostly male alcoholics who had an average of 11 to 14 years of uncontrolled drinking, and were hospitalized for only a few days to a little over a week. Our patients were all women, hospitalized for 30 days after 7.8 years of uncontrolled drinking, and probably have a better prognosis than theirs. The Hollywood Hospital patients had a number of advantages that were not reported in the literature.[6] Many were selected for good motivation, had money, and supportive friends and relatives. The investigators would often buy them clothes, take them out to dine, get them jobs, and work 60 hours with them. Under these circumstances it seems questionable to attribute the whole benefit to a single session with lysergide. The other modes of help appear less elaborate in Smith's work. Other successes with lysergide have been reported (4–7) but they too mostly lacked controls. The single exception is the Jensen and Ramsay study (6) in which the "control group" ap-

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pears to have been in an entirely different program from the lysergide group. It does not seem clear to everyone that without some sort of control it is impossible to know whether a newly tried procedure is working or one is simply getting what the normal selection and care of the patients produces without the added "magic."

Along with Smart and Storm (8) and Smith (9) it appears fair to say the study of treatment of alcoholics with lysergide has passed a promising pilot phase and now needs adequate experimental control. There is subtle humor in Fould's (10) finding that 73% of new treatments reported in psychiatric journals lacked controls and that 83% of uncontrolled but only 25% of controlled studies reported success. We will comment later on some of our own findings that might have seemed significant had we not had controls.

Method

We wished to determine whether the treatment of alcoholics with lysergide could be useful in a hospital that admits 1,600 alcoholics in a year. For this reason we treated more than 1 patient at a time, while creating as pleasant a setting as practicable. Those who are experienced with psychedelic substances generally accept that the subject's emotional state and the setting of his experience is a critical factor in outcome. It is not simply a matter of giving a drug to a person once to alter fundamental habits and the routine of his life. The drug was used as a facilitating agent in a therapeutic setting.

Pilot Phase. A 4-month pilot phase was undertaken in which 3 of the 4 principal investigators studied the lysergide reaction on themselves. One of them had a long period of experimentation, having taken lysergide 50 times in a variety of settings; some of this experience has been reported elsewhere (11, 12). Neither the psychiatrist nor the 3 psychiatric technicians in the project had the experience, but they had seen it often and were considerate of the subjects under lysergide. The drug was given to 15 subjects reported here as the pilot group. In this period we experimented with dose levels and setting to obtain maximum positive results. The reports of others that alcoholics required higher doses than normals were confirmed. Our average dose was 400 μg with a range of 100 to 800. This was regulated by whatever was necessary to evoke a reaction.

Control. Our original plan was for a double-blind study. Subjects were to be assigned by a person outside the study to experimental and control groups, matching them on the Mindlin Prognostic Index (13). Experimental subjects were to get lysergide and control subjects scopolamine, which has some side effects but is not a psychedelic substance. Neither the subjects nor the experimenters were to know who received the identical-appearing scopolamine. In four out of five cases of scopolamine

administration, both the investigators and the subjects doubted that lysergide had been administered because there was no reaction. The subjects lived together and their suspicions were rapidly communicated to each other. In addition, on several occasions staff members outside the project revealed the fact of a nonlysergide control group. Because of the patients' guessing and leak of information, we abandoned the double-blind control after running five subjects. This group was too small for reliable conclusions.

We continued the experimental phase by assigning subjects to 1-, 2- and 3-session groups which were equated on the basis of age and the Mindlin Prognostic Index. This index was validated on alcoholics in outpatient treatment. It assigns a weighted rating based on such factors as marital status, economic resources, occupational level, arrests, intellect, diagnosis, and an estimate of motivation. By this means we hoped to equate the 1-, 2- and 3-session groups on prognosis for recovery from alcoholism.

To substitute for the missing control group we began following up 37 women who had been in the same program just prior to the addition of lysergide to the treatment. These subjects provide a baseline of what was already being accomplished. We could then compare results on 28 prelysergide controls, 15 pilot lysergide patients, 29 given 1 lysergide session, 18 given 2 sessions, and 9 given 3 sessions, a total of 99 subjects.

Subjects and Preparation. The women learned of the experiment from each other and from the investigators. The feedback from those who had gone through the experience generally encouraged others to try it, though some subjects found it unpleasant and discouraged others. They learned from each other and the therapists what they might expect. Each was vigorously counseled to cooperate with the experience, to permit it to show them something of themselves rather than attempt to control their reactions while in it. The average subject had been in the hospital some 2 weeks, had recovered from gross physical disturbances after drinking, and had participated in a small therapeutic-community-like setting on the alcoholism unit. They had engaged in various social activities on and off the unit, and had started a work assignment.

When they volunteered for the experiment they were assigned a staff member who worked with them before, during and after the experience. Often the staff person was chosen by them and was already their friend. The grossly brain damaged, prepsychotic, and emotionally severely disturbed were screened out to remove some not likely to benefit or those who might be disturbed further by the experience. Major characteristics of these women are given in Table 1. In spite of the varied diagnoses they were all admitted primarily because of alcoholism.

Sessions. One day before the session all other medications, principally vitamins and phenothiazine derivatives, were stopped. The day of the session the subjects got up at 7 AM, showered and dressed comfortably, and had a light breakfast of coffee and toast or none at all. From 1 to 4 subjects (average of 2) went to the day hall of the unit. This is a large

TABLE 1.—*Some Characteristics of Subjects*

	Pilot	*1-Dose*	*2-Dose*	*3-Dose*	*Total*	*Range*
Age						
N*	15	29	18	9	71	
Mean years	42.6	39.8	42.0	43.6	41.4	23–64
S.D.	9.29	6.78	10.18	9.51	8.77	
Length of excessive drinking						
N*	13	28	15	8	64	
Mean years	7.19	6.96	9.73	8.31	7.82	5–25
S.D.	7.85	5.38	6.28	8.72	6.78	
Number of delirium tremens						
N*	8	23	11	8	50	
Mean	1.0	0.69	0.91	3.62	1.16	0–25
S.D.	0.0	1.12	1.16	8.14	3.56	
Number of arrests						
N*	10	22	13	9	54	
Mean	1.70	4.23	1.15	0.44	2.35	0–15
S.D.	3.82	4.07	1.40	0.68	3.53	
Mindlin Prognostic Index†						
N*	–	29	18	9	56	
Mean score	–	5.21	6.08	5.78	5.58	0–11.5
S.D.	–	2.72	2.55	3.51	2.70	
Diagnoses						
Alcoholic	4	22	13	8	47	
Psychoneurotic	2	3	1	1	7	
Narcotic addict	2				2	
Acute brain damage	2	1			3	
Schizophrenia	1	1			2	
Adult situational reaction			1		1	
Personality disorder‡	3	2			5	

* Data were not available on all subjects, hence the *N*s vary.

† The Mindlin scores are normally on a scale with plus and minus values. For ease of statistical handling they were converted to a single scale with 0 on the original Mindlin equal to 5 on this scale.

‡ Other than alcoholic.

living room on the first floor looking out on a gardened area. The subjects each had a lounge chair, a therapist, and a degree of privacy with some cloth screens between them. There were paintings on the walls, art books and hand mirrors; concert music was played during most of the session. The room had an adjoining kitchen. Present were the subjects and the staff working with them, who were male psychotherapists and female psychiatric technicians. The psychiatrist visited and was prepared to adjust the dose. Lunch was available, should they wish, together with coffee or fruit juice. Few were interested in eating. No intruders were permitted.

The day belonged to the subjects. If they wished to speak with any member of the staff, he or she was available. Or the women could remain alone in their thoughts, with a staff person in the adjoining room or unobtrusively nearby. For a state hospital setting, the subjects had an unusual degree of privacy and personal attention.

Most of the women enjoyed the music though some wanted it turned off later in the day. Most lay quietly on the lounge and showed some feelings. Some thought of issues as large as the meaning of life and their place in it, while many considered tearfully their relationship to husband, children or boyfriends. Rarely did they examine drinking. It seemed to be secondary to larger issues facing them. They often lay peacefully from 8 to 1 o'clock with a little leisurely moving about from 1 to 3 or 4 PM. Having started at 8 in the morning, the reaction was wearing off by late afternoon. They then remained relatively alone on the unit or talked with other patients on the unit, who proved to be good adjunct therapists. The next day they gave us a written account of their experience and checked off the Blewett Scale of Psychedelic Reactions. Much that emerged in the session was worked through with staff in the days following.

Only three sessions were terminated early because of the subject's reaction—an asthmatic attack, an epileptic seizure, and a disturbed emotional reaction. We learned to deal with disturbed reactions and would later have been willing to work through seizures or any other kind of reaction.

Follow-Up. Social service field workers and our own staff attempted to trace the outcome in all subjects at 6, 12 and 18 months after hospitalization. The actual follow-up times correspond closely to this. They were able to find 68% of all the subjects. If possible they visited the person or interviewed her in the office; if necessary they telephoned or wrote. Over half of the cases had a personal contact; 20% were reached by telephone or letter and 25% returned to the hospital for a very adequate follow-up. A best guess is that the group that could not be reached had poorer outcomes since they had no permanent address or ties to friends. The field workers did not know who was in the lysergide group and who was not at the time of follow-up.

Subjects were rated on the following scale:

Much improved: Complete abstinence or only drinking very small quantities.
Improved: Definite reduction of alcohol intake.
Unchanged: No fundamental change or temporary improvement and relapse.
Worse: A deterioration in drinking habits.

When possible, information was gathered from several sources. The subject was also rated on whether she was more productive at home or in social relationships and whether she was more stable and productive at work.

Results and Discussion

The main issue of this study was whether the addition of therapeutic lysergide sessions would affect the drinking pattern of women alcoholics. We were able to compare the results of a fairly good treatment program before and after the addition of lysergide. There were no other important changes in the program that we were aware of except that the addition of lysergide research brought in more staff time and gave something of a focus of interest in the program. We could also search for differences between 1, 2 and 3 sessions with lysergide.

One thing we learned in the follow-up was that alcoholics could look very good one week and be quite drunk the next, so that some sort of composite rating which took account of variations over time would have been more appropriate. As it is we sampled the subjects at 6-month intervals. The results, which reflect just the recent past in comparison to their adjustment prior to hospitalization, are shown in Table 2.

The groups were compared by chi-square test and Duncan's range test (14), a variant of the analysis of variance. At the 5% level there was no significant difference between any of these groups—indeed the differences did not even approach significance.

The lysergide subjects were not noticeably more sober than those treated before lysergide. There was no noticeable difference between the results with 1, 2 or 3 sessions. The results of prior studies are not supported by these findings. We realize that this is a hard appraisal of the effects of the drug. We were looking for a change only in the specific bit of socially unapproved behavior, drinking by alcoholics, and did not find it. This does not reflect on the drug's possible usefulness for other purposes such as deepening the values of persons.

Table 2.—*Follow-up Results*

Key: Average results are reported on a scale in which 2.00 = worse, 3.00 = same, 4.00 = improved, 5.00 = much improved.

	Prelysergide ($N=37$)		Pilot Lysergide ($N=15$)		Lysergide Experiment ($N=56$)	
Months	*Average Results*	*% Followed*	*Average Results*	*% Followed*	*Average Results*	*% Followed*
6			3.66	100	3.71	75
12			3.58	80	3.97	61
18	4.03	76	3.70	67	3.97	63

We attempted to determine what other information might be reflected in our measures. Of all the lysergide subjects reported on, about half were found working (48%), and many of those not working were housewives. By the chi-square test there were no significant differences between prelysergide and pilot-lysergide or the experimental groups in this respect. In 68% of the cases an improvement in social life or social relations was reported, with no significant differences between groups.

None of our measures showed any relationship to the follow-up results. The Mindlin Index, designed for prognosis in alcoholism, correlated only +.22 (Pearson product moment) with the 6-month follow-up results (not significant at the 5% level) and does not appear to be a usable prognostic index in this group. We also determined the correlation between the average follow-up results with age (.21, N=65), history of delirium tremens (.05, N=45), history of arrests (−.02, N=49), and length of time drinking had interfered with the life pattern (.17, N=58). None of these correlated significantly with outcome. Diagnosis showed no relationship to outcome. In effect, we had no measure that could adequately predict future abstinence. We hypothesized that the rate of abstinence would drop as the length of follow-up was extended to 1½ years. This was not substantiated. The results remained relatively consistent over time.

The remaining information of value was the Blewett Scale describing the lysergide experience and the patients' written account of the experience. For the written accounts we devised four scales which described:

A. The degree to which the subject worked on or was concerned with aspects of her personal life.

B. Naturalness of expression in the patient's account (some seemed cold and stilted).

C. The emotional intensity of the experience.

D. The degree of transcendence—the tendency for the experience to rise above bodily awareness, ordinary personal concerns, into a sphere which is esthetic, religious, or otherworldly.

Three psychology students independently rated the written accounts on these scales and their ratings were averaged. None of these averaged scale ratings correlated to outcome. We had failed to find any measure that would tend to predict outcome.

On the Blewett Scale of Psychedelic Reactions almost all subjects felt that the drug had unusual effects which they had not

experienced before. On this scale most indicated that they had felt physically different and even weightless. They did not want to fight off what was happening to them (though 18% did). Most indicated no physical discomfort or fear of dying and found the experience intensely memorable and real. Almost none felt suspicious of others, neglected by others or unduly influenced by the others present. They felt a high level of trust and affection for those present, and also more self-acceptance. Seventy-nine per cent checked Very Much or Moderately to feeling several levels of awareness. Time seemed changed, colors brighter, music enhanced, and many noticed synesthesia; 75% felt a spiritual bond with others; 72% felt a unity of all things and that they were part of this unity, which 60% were willing to call God; 80% felt they gained a more complete acceptance of others; 84% felt their own understanding was enhanced.

Excerpts from a few written accounts, by different patients, may be of interest.

Instead of my children hating me and being ashamed of me, as I've been bothered with in the past few years, they were the only ones that were there when I'd come up out of the gutter each time, with their arms around each other and smiling at me as I ascended from the black hole. My boys would take turns helping me out of the hole and dancing me around it, while my daughter stood on the sidelines looking beautiful and smiling, with tears in her eyes.

As the drug was beginning to wear off I arose unsteadily and stood looking out the window at lawns and trees. Suddenly flashes came down from the ceiling, merging in a conical-shaped dark point—from which came "the answer": I had ceased being a woman and a wife to my husband and had become, instead, a working partner in our business. This tremendous perception was in coordination with a crescendo in the music. When I failed him I also failed myself in these emotions. This is what I have been missing so desperately in the years I have turned to drinking.

At one point I felt I was living before my time. Once I actually thought I was insane and someone was tampering with my brain. I had died and started to live again. After that some unknown person seemed to be pushing me to do things, indicating I should be strong and alert to taking responsibilities the way I should.

The trip inward revealed fragility and strength, delicacy and depth. I thought of life as a continuum—all things related—without beginning or end. I was part of the earth and of the sky, belonging to all things, possessing none. There was togetherness of myself.

It does not appear that we had failed to produce the transcendent state which many consider the key to lysergide treatment of alcoholics.

Conclusion

If we had not had a control group our evaluation of results would have been mixed. Most of the women were impressed by the lysergide and gave us accounts indicating it was one of the more significant experiences of their life. This would have affected our judgment. Staff who were most identified with its use would have been inclined to say the experiment was a great success, while those who were not so identified with it and not so inclined to invest time in its administration would have called it a failure. Without the control group our actual follow-up results would have been impressive to most of us. Our results are not directly comparable to those of the Canadian studies because of the difference in sex of subjects and unknown selection factors. Still our results appear much below what they are reporting; perhaps in part because we were already so successful with these women that there was no room for improvement. The study has impressed us with the importance of controls and accurate base-line measures on which to evaluate treatment results. Without them, treatment is judged on impressions and opinion.

The lysergide was successful in breaking through the façade of these people and opened up to us and to them their desperate concerns over their life situation. This brought life and honesty into the psychotherapeutic relationship. In this the issue of drinking was peripheral and symptomatic. Though we did not demonstrate increased sobriety, the power of lysergide to reveal the real concerns of people remains impressive.

REFERENCES

1. MacLean, J. R., MacDonald, D. C., Byrne, U. P. and Hubbard, A. M. The use of LSD-25 in the treatment of alcoholism and other psychiatric problems. Quart. J. Stud. Alc. 22: 34–45, 1961.
2. Smith, C. M. A new adjunct to the treatment of alcoholism: The hallucinogenic drugs. Quart. J. Stud. Alc. 19: 406–417, 1958.
3. Chwelos, N., Blewett, D. B., Smith, C. M. and Hoffer, A. Use of *d*-lysergic acid diethylamide in the treatment of alcoholism. Quart. J. Stud. Alc. 20: 577–590, 1959.
4. Eisner, B. and Cohen, S. Psychotherapy with lysergic acid diethylamide. J. nerv. ment. Dis. 127: 528–539, 1958.
5. Chandler, A. and Hartman, M. Lysergic acid diethylamide (LSD-25) as a facilitating agent in psychotherapy. Arch. gen. Psychiat. 2: 286–299, 1960.