LSD TREATMENT IN ALCOHOLISM

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INTRODUCTION

One of the major problems at Mendota State Hospital is with the alcoholic: how to get him back on his feet, and how to induce him to abstain from drinking so that he can engage in a satisfactory level of social productivity. To deal with this problem we are compelled to examine new and potentially productive treatment techniques, one of which is LSD therapy. Before delving into the particulars of this treatment, it may be helpful to discuss the development of our interest in LSD therapy, how this technique evolved and the way it is eventually evaluated.

Prior to my interest in LSD, I was conducting research with narcotic drug addicts at the Federal Narcotic Hospital in Lexington, Kentucky. Our project involved the evaluation of the effects of hypnosis on morphine-produced phenomena and on withdrawal symptoms. For example, in the case of good hypnotic subjects who were also narcotic addicts, the suggestion could be made that they had discovered a supply of heroin and were going to inject the drug into themselves. Under hypnosis, then, these addicts would take off their belts, tighten them

around their arms and, using an imaginary hypnotic needle, shoot the "heroin" into their veins. The belts would then be loosened, and the subjects breathed deeply, evidencing ecstatic facial expressions and all the other common subjective reactions to heroin. These individuals were able to give excellent descriptions of the effects of the imaginary drug they had just taken, and our measurements of physiological and behavioral phenomena yielded some interesting data. We found that hypnotic suggestion could produce many narcotic-like symptoms.

The suggestion was then made that the subject had been arrested and confined to a jail cell. He was then led to believe that, because he had a heavy habit and had not had his last dose of heroin for quite a while, that he was undergoing withdrawal, or "cold turkey." The results were phenomenal: the patients began breaking out in a sweat, they developed nausea, aches and pains, increased blood pressure, and a number of them actually began to vomit. We were able to measure significant pupillary dilatation, a universal concomitant of narcotic withdrawal. None of these subjects were under the influence of a drug—the effects arose solely out of hypnotic suggestion.

The fact that heroin-type effects could clearly be produced under hypnosis suggested that the actual drug effects could be diminished or terminated by the same technique. To test this hypothesis, patients under hypnosis were given a large dose of morphine, but were told that they were actually receiving sugar water. The post-hypnotic suggestion was made that they would not experience any drug effects after they were brought out of hypnosis. This experiment was conducted with five subjects, and three of them displayed no reaction to the drug following hypnosis—simply by suggestion it was possible to eliminate subjective response to the drug. But, despite this lack of subjective response to morphine, the normal behavioral and physiological effects of the drug were still present.

Another project was being run simultaneously at the Addiction Research Center (also in Lexington) in which the subjective effects of LSD and other psychoactive chemicals were being evaluated. Several of the addicts who served as subjects for the LSD research, although ignorant of the fact that they had received LSD, spontaneously volunteered that the drug state had produced in them a novel outlook on life, and many indicated their desire to cease narcotic drug use. This

was not a large percentage, but there was a small, significant group of patients who reported this feeling. Since we were interested in treating the narocitc drug addict, and since no reliable treatment technique for this disease had been developed, we felt compelled to examine this serendipitous method for reaching the addict.

About 90% of the narcotic addicts admitted to Lexington, upon follow-up examination, were found to have returned to the life of an addict within a few years of their release. This statistic was a very poor endorsement of existing therapeutic techniques and it was felt that there was little to lose by examining the potential of LSD in treating the heroin addict. We had been intrigued with the pilot reports in the literature of the drug's power to change attitudes and behavior for the better and were encouraged by the above-mentioned reports of former addicts.

One of the things we discovered from the previous workers was that LSD had a very profound effect in only about five or ten percent of those given the drug. As we were interested in maximizing the therapeutic potential of the drug, our experiments with narcotic addicts led us to believe that hypnosis might enhance the chances of an individual having a profound experience. We also hoped that, by hypnotizing a person under LSD, we would be able to mold, channel and structure the experience and direct it in the optimum therapeutic direction.

We then began initial tests on the possibility of using LSD as a treatment modality for narcotic addiction. Our first study involved 12 drug addicts and at this time we were interested in developing the technique which we later called hypnodelic therapy, a combination of LSD and hypnosis. We discovered that the LSD reaction could, in fact, be controlled exquisitely through the use of hypnosis. We hypnotized subjects before administering the drug and, as the drug state emerged, the therapist could regulate the LSD effects and direct the patient to focus on the nature and possible resolution of his problems. We were quite pleased with the fact that this technique could be used with narcotic addicts and the reports of the patients at the end of their sessions were even more gratifying.

The success of this exploratory study led us to undertake a larger, controlled study with seventy narcotic addicts, in which several dif-

ferent techniques were evaluated and compared. One of these techniques was hypnodelic therapy, which was compared to psychedelic therapy (a combination of LSD and psychotherapy), hypnotherapy, and psychotherapy alone. The patients were assigned randomly to one of these 4 treatment groups and evaluations were conducted prior to the therapeutic sessions, two weeks afterwards, and two months after the sessions.

In terms of the questionnaires used to evaluate the patients, significant improvement was observed with the hypnodelic therapy technique as compared to the other treatment methods. The result was, again, quite exciting. But, there was one problem—since the addicts were locked up in Lexington, there was no adequate way of testing just how good a deterrent to narcotic addiction hypnodelic therapy really was. We were not sure whether our "successes" were any real measure of how these addicts would fare once back on the street and all that we did was to simply measure their responses to questionnaires.

LSD AND ALCOHOLICS

After two years at Lexington, this interest in hypnodelic therapy accompanied my transfer to Mendota State Hospital in Madison. There, it was decided to attempt an evaluation of the various LSD treatment modalities in alcoholics. Our sample consisted of 176 patients, who were committed to Mendota State with extensive histories of alcoholism. All were males, between the ages of 21 and 55 and every one had been previously admitted to Mendota for alcoholism a maximum of four times.

In this study, hypnodelic therapy was evaluated by comparisons with some other types of LSD administrations as well as with a situation in which no specific therapeutic technique was employed. This latter comparison was made because, if LSD is given to the patient and he reports feeling better, one is still not certain that he feels any better after LSD than he would after being given a sugar pill. To effectively evaluate a therapeutic technique, it is necessary to compare it to a control situation—this was the purpose of the "no therapy" condition.

For all treatments involving LSD, the patient received 3 micrograms per kilogram of body weight of the drug at the beginning of the

session. Regardless of the treatment condition being studied, all sessions occurred in the morning and lasted approximately three hours. A brief review of the three LSD treatment conditions is presented here, and interested readers are referred to the more detailed descriptions to be found in the literature (Ludwig *et al.*, 1967; Ludwig *et al.*, 1970).

Hypnodelic therapy condition (hypnosis + LSD + psychotherapy): Following administration of the appropriate dosage of LSD, a deep hypnotic trance was induced. Upon attaining this state, psychotherapy was initiated and attempts were made to focus on the subject's major problem areas. Hypnotic control was periodically reinforced through appropriate suggestions and techniques.

Psychedelic therapy condition (LSD + psychotherapy): The patients were administered LSD and then requested to discuss their problems. Similar to the hypnodelic therapy condition, therapists began to engage in an active form of psychotherapy.

Drug therapy condition (LSD alone): This condition involved the patient taking the appropriate dosage of LSD and then being instructed to relax and to reflect on his problems. The patient was also told that, though he would have to individually "work through" his problems, a therapist would remain in the treatment room throughout the duration of the session. The therapists were not to engage in dialogue with the patient unless a panic or anxiety situation arose.

No therapy, or milieu therapy condition: Patients assigned to this control group spent equivalent session time engaged in writing autobiographies which discussed the reasons for their problems and constructive plans for the future. Although they received no active or specific form of psychotherapy or drug therapy, these patients were subject to the basic milieu treatment program of the Alcoholic Treatment Center at Mendota State Hospital.

Prior to release, half of the patients in each therapy condition were randomly assigned to the Antabuse program. Antabuse is a drug which, if taken in conjunction with alcohol, induces nausea and vomiting. Hopefully, if an alcoholic is placed on Antabuse, and he is aware of the possible emergence of these unpleasant symptoms, he would be additionally motivated to abstain from drinking. We further assumed that, if any of these therapies were truly effective, the desire and motivation to continue using Antabuse after release would increase and

therefore potentiate the therapeutic benefits of an effective technique.

EVALUATION

The evaluation of a therapeutic technique is not an uncomplicated matter. Subjects can be queried, by interview or questionnaire, but self-reports are not the most reliable of indicators. Hence, we employed three different measures of drug-induced changes. One dealt with the patient's attitudes and feelings and tried to determine if these attitudes and feelings changed in a constructive direction as a result of any specific therapy. A second measure had to do with behavior, and focused particularly on drinking behavior. A third dimension measured was that of social and community adjustment. This area was studied because, though patients might perceive themselves as behaving more effectively in this realm as a result of treatment, these perceptions might not be shared by their families and neighbors.

Therefore, in order to determine the effectiveness of the various therapeutic techniques, the study was designed to evaluate changes in these three related spheres: attitudes, actual behavior, and community adjustment. Paper and pencil questionnaires were employed to measure attitudes and a drinking follow-up form was used to measure actual behavior. Six and twelve months after release, interviews with the patients' relatives and neighbors were conducted to determine how well the patients had adjusted in social relations.

Patients were followed-up at three months, six months, nine months, twelve months and eighteen months after release. The alcoholic patients in the sample, when they agreed to participate in the program, had also agreed to make themselves available for follow-up by coming into the hospital for evaluations. But, in fact, it was extremely difficult to conduct a good follow-up with this population and it was only by employing social workers and others to trace the patients that 92% of them were finally evaluated.

During the face-to-face interviews, a breathalyzer (which gives a direct reading of blood alcohol from a person's breath) was administered to all patients. This gave us an objective measure to compare with the subjects' statements on their own drinking behavior.

Thirteen psychiatrists participated as therapists in the study, each assigned an equal number of patients in all 4 of the treatment conditions. By distributing therapeutic competence in this manner, we hoped to avoid biasing the results of treatment. Each matched block of patients assigned to a particular therapist consisted of two representatives of each treatment modality and half of these subjects received Antabuse upon discharge. All participating therapists, through intensive reading and demonstration sessions, were trained in the techniques of hypnosis and the administration of LSD prior to the project. The therapists did not receive a dose of LSD nor were they hypnotized as part of this training process. Through these safeguards, we had set up a situation in which the potencies of the various treatment techniques to change the alcoholic could be tested.

First of all, alterations in attitudes as a result of therapy were evaluated in the patients, and it was found that all three LSD therapies produced significant changes in the patients' attitudes. However, the no-therapy condition also produced significant changes and when the LSD therapies were compared to the no-therapy condition, no significant differences in outcome were found: they all produced essentially the same effects. Because before and after measures indicated positive transformations in attitudes among the LSD subjects, we would have been extremely impressed, had a control group not been used.

In the area of community development and adjustment, significant improvement was seen with all the LSD therapies, but this improvement did not differ from the improvement shown by those in the no-therapy condition.

Similar comparative results were observed in our behavioral measurements—the cumulative percentage of persons who returned to drink after discharge was approximately the same, regardless of the therapy which they received. By about six months after discharge, 70% of the patients had returned to drinking and by twelve months following release, about 85% of them were drinking to some extent. However, at any given time during the follow-up investigations, only about 50-55% of the patients were actually drinking. These figures suggest that, though many returned to alcohol consumption, several were vascillating in their drinking behavior.

We believe that this study is as definitive as can be regarding the

treatment effectiveness of LSD on alcoholics, and our results are quite discouraging. If LSD alone had been evaluated, any therapist would have been impressed (assuming he had relied on the self-reports of the patients following the LSD sessions). But, there is a disparity between the patient's reports and his actions and there seems to be very little correlation between what he says and what he does. It seems reasonable to conclude that, despite the enthusiasm that has been whipped up over LSD effects on alcoholism, the effectiveness of this form of therapy turns out to be a mirage.

REFERENCES

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