PSYCHEDELIC THERAPY (UTILIZING LSD) WITH CANCER PATIENTS[1]

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The event which led to our investigative entry into the area of psychedelic therapy for terminal patients was unplanned. A professional member of our research department, a woman in her early forties, developed a progressive neoplastic disease. She had undergone radical mastectomy, and subsequent surgery had revealed inoperable metastases to the liver. Although still ambulatory, she was fully aware of the gravity of her condition. She became increasingly depressed. Confronted with this situation, our colleague, while not directly associated with the LSD projects (Psychedelic Therapy in the Treatment of Alcoholism, and Psychedelic Therapy of Chronically Ill Psychoneurotics), was conversant with the nature of our work. She requested treatment.

In support of this approach, a search of the scientific literature revealed little more than a series of studies by Kast (1, 2, 3, 4) describing his investigations with terminal cancer patients in which a series of compounds, including LSD, was studied for their analgesic properties. Although some analgesic effect was noted with LSD, Kast observed that in some of the patients receiving LSD there appeared to be a lessened apprehension concerning dying. He also noted that none of the patients appeared to have an adverse reaction to the drug's effect although these patients were critically ill. Cohen came to similar conclusions in a small series of patients (5).

After discussions with her husband, her physician, and with the approval of all concerned, a course of psychedelic therapy was initiated. Preparations for the LSD session occupied somewhat over a week. The focus was on the issue of personal identity and the state of important current relationships. Two days after the 200 mcg. session, the patient (Pt. D-1) went on vacation with her husband and children. Upon return, two weeks after the session, she completed the report which is reproduced below:

The day prior to LSD, I was fearful and anxious. I would at that point have gratefully withdrawn. By the end of the preparatory session practically all anxiety was gone, the instructions were understood, the procedure clear. The night was spent quietly at home; close friends visited and we looked at photograph albums and remembered happy family times. Sleep was deep and peaceful. I awakened refreshed, and with practically no fear. I felt ready and eager.

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The morning was lovely—cool and with a freshness in the air. I arrived at the LSD building with the therapist. Members of the department were around to wish me well. It was a good feeling.

In the treatment room was a beautiful happiness rosebud, deep red and dewy, but disappointingly not as fragrant as other varieties. A bowl of fruit, moist, succulent, also reposed on the table. I was immediately given the first dose and sat looking at pictures from my family album. Gradually my movements became fuzzy and I felt awkward. I was made to recline with earphones and eyeshades. At some point the second LSD dose was given to me. This phase was generally associated with impatience. I had been given instructions lest there be pain, fear, or other difficulties. I was ready to try out my ability to face the unknown ahead of me and to triumph over my obstacles. I was ready, but except for the physical sensations of awkwardness and some drowsiness nothing was happening.

At about this time, it seems, I fused with the music and was transported on it. So completely was I one with the sound that when the particular melody or record stopped, however momentarily, I was alive to the pause, eagerly awaiting the next lap of the journey. A delightful game was being played. What was coming next? Would it be powerful, tender, dancing, or somber? I felt at these times as though I were being teased, but so nicely, so gently. I wanted to laugh in sheer appreciation—these responses, regardless of where I had just been, how sad or awed. And as soon as the music began I was off again. Nor do I remember all the explorations.

Mainly I remember two experiences. I was alone in a timeless world with no boundaries. There was no atmosphere; there was no color, no imagery, but there may have been light. Suddenly I recognized that I was a moment in time, created by those before me and in turn the creator of others. This was my moment, and my major function had been completed. By being born, I had given meaning to my parents' existence.

Again in the void, alone without the time-space boundaries. Life reduced itself over and over again to the least common denominator. I cannot remember the logic of the experience, but I became poignantly aware that the core of life is love. At this moment I felt that I was reaching out to the world—to all people—but especially to those closest to me. I wept long for the wasted years, the search for identity in false places, the neglected opportunities, the emotional energy lost in basically meaningless pursuits.

Many times, after respites, I went back, but always to variations on the same themes. The music carried and sustained me.

Occasionally, during rests, I was aware of the smell of peaches. The rose was nothing to the fruit. The fruit was nectar and ambrosia (life), the rose was a beautiful flower only. When I finally was given a nectarine it was the epitome of subtle, succulent flavor.

As I began to emerge, I was taken to a fresh windswept world. Members of the department welcomed me and I felt not only joy for myself, but for having been able to use the experience these people who cared for wanted me to have. I felt very close to a large group of people.

Later, as members of my family came, there was a closeness that seemed new. That night, at home, my parents came, too. All noticed a change in me. I was radiant, and I seemed at peace, they said. I felt that way too. What has changed for me? I am living now, and being. I can take it as it comes. Some of my physical symptoms are gone. The excessive fatigue, some of the pains. I still get irritated occasionally and yell. I am still me, but more at peace. My family senses this and we are closer. All who know me well say that this has been a good experience.

MMPI's were administered to Pt. D-1 one week prior and two weeks subsequent to her LSD session. The retesting indicated a significant reduction on the depression scale and a general lessening of pathological signs. She returned to work and appeared in relatively good spirits. Five weeks after the date of the session, upon the sudden development of ascites, the patient was rehospitalized. She died quietly three days later.

The dramatic relief the patient (D-1) experienced brought about a desire to investigate this approach further. The necessity of carrying out this type of study in a general hospital setting led to consultations with the chiefs of the psychiatric and surgical services of the Sinai Hospital, Baltimore, Maryland. Subsequent approval resulted in initiation of a pilot study there. Case histories of the first six patients are reported in this paper and results are summarized in the tables below.

METHOD

The special procedures developed for facilitating positive psychedelic peak reactions have been described in the literature (6, 7, 8, 9), and will not be gone into extensively here. The psychological characteristics of the peak LSD experience are listed in footnote** under Table 1 and more fully defined elsewhere (10, 11). However, it should be noted that positive psychedelic peak reactions are not always achieved. It should be emphasized that the first objective was focused on developing a positive relationship with the patient and instilling a feeling of confidence in the initial interviews before any discussions relating to the use of LSD were initiated.

The conduct of the session was patterned along lines which had been employed in psychedelic therapy with psychiatric patients. The therapist and a nurse were present during the entire 10-14 hour psychedelic session, with the therapist providing constant guidance and support for the patient. Carefully chosen musical selections were used to channel affective expression; likewise, family pictures were used to resolve interpersonal difficulties

and mobilize positive feelings. In the evening following the treatment day, therapy was continued with the family and the patient together, and usually this became a period of very gratifying emotional exchange. Arrangements were made for follow-up contact, and it was indicated that additional LSD treatment was a possibility.

As this new treatment approach was begun, a great deal of discussion and orientation had to be carried out with the nursing and professional staffs who were already caring for the patient. This was a particularly delicate situation because we utilized our own staff for the specialized LSD treatment itself. Fortunately an enthusiastic milieu resulted from the positive post-treatment impressions conveyed by the first few patients to the staff who then had the opportunity to converse with these patients personally.

In preparation for the psychedelic LSD session, it should be emphasized that the initial goal was focused on getting to know the patient and instilling a feeling of confidence and trust. The development of trust was essential to ensure that, once rapport had been established, interviews with patients could be more informative about the nature of the LSD experience and what results could be expected. No significant attempts were made to probe into deep conflict material or traumata. Discussions with the patients tended to revolve about philosophical issues and current interpersonal relationships with significant people in their lives. This necessitated the involvement of the family members as much as possible in order to open up a greater degree of communication.

Families were seen both with and without the patient. They were given a chance to discuss their own feelings about the coming death and were encouraged to increase their interaction on as many levels as was appropriate in order to decrease the psychological isolation usually felt by such patients. Their fear of upsetting the patient and the fear of death itself were usually significant issues.

Our usual practice was not to confront the patient himself with the fatal outcome of his illness, but to encourage an attitude of "taking one day at a time," and living each day as fully as possible. It was important, however, for the therapist to be *willing* to discuss issues of diagnosis and prognosis and to be on guard lest his own anxiety over such an encounter would lead him unconsciously to give non-verbal cues to the patient that such a subject was not to be discussed. In this tenuous situation, reliance was placed on the intuitive sensitivity of the therapist in charting the course.

Patients were referred for psychedelic therapy by the chief of the Oncology Service (L.E.G.) of the Sinai Hospital. The initial criterion was the presence of a depressive reaction associated with the patient's physical condition which usually was associated with pain. Another factor considered was the feeling of frustration and helplessness on the part of the staff in the face of demands for help from patients whose condition was chronically worsening. The distress of the relatives also played a role in the selection of these first cases.

CASE HISTORIES

The wife of the first patient thus selected (Pt. D-2), was seen initially. In this interview she was informed that there was an experimental treatment which might be helpful in making the patient more psychologically comfortable and that the treatment employed LSD. She expressed the feeling that anything which might help her husband feel more comfortable would be desirable. This was a position frequently expressed by relatives of other patients for whom permission was being sought for this treatment.

The next step was introducing the therapist to the patient and outlining the objectives of the treatment. In this case, the patient's initial reaction was one of irritation, stating: "I've got 24-hour pain and they send me a psychologist." Nevertheless, since the patient's rejection was not complete, steps were taken to establish rapport. The treatment was gradually broached and an attempt was made to explain to the patient that it was not for his physical symptoms and disease, which were chronic, but to help him to live more comfortably with more "peace of mind." Some attempt was made to explain the role of psychic tension and anxiety in intensifying pain and causing additional discomfort. Subsequently, he was seen in several interviews, one of which was a joint meeting with his wife.

Several articles on "The Psychedelic Use of LSD" (12) were left for him to read. This procedure was repeated with every patient who was capable of so doing. In those who were not capable of maintaining the necessary concentration, portions of these selections were read to them. As a result of his reading and discussions with the therapist, the patient became interested in the procedure. He was, however, still resistant and fearful that pain medication might be withdrawn and the "psychological treatment" implied that his trouble might be "only in his mind." Nevertheless, with increasing rapport a therapeutic relationship developed. Eventually the first session took place, as described below.

Case D-2: This sixty-five-year-old, white, married Jewish male began complaining of episodes of severe and lancinating bilateral abdominal pain in the upper quadrants, associated with a feeling of fullness. Three years prior to LSD treatment, the patient was found upon exploratory laparotomy to have a lymphoblastic lymphosarcoma. Since that time, he had several readmissions for attempts to control his increasingly severe abdominal pain which then became associated with episodes of syncope and a general deterioration in his condition.

When the patient was evaluated for LSD therapy he was depressed, anxious and preoccupied with various bodily complaints, mainly his pain for which he was receiving Demerol on a regular basis.

Prior to his LSD session, the patient was seen in preparation for a total of 9 hours (6 interviews). During this time, reasonably good rapport was established; the "psychology of pain" was discussed at some length, and specific preparation for the LSD session was accomplished. The question of diagnosis was not raised by the patient. The patient's wife was also seen during this time, both alone and with her husband.

The patient was given 100 mcg. of LSD by mouth, followed by a second 100 mcg. dose 45 minutes later. During the early hours of the session there were several occasions of meaningful catharsis and intense emotionality. Patient's periodic complaints of pain were all transient to the extent that attention was focused on other sensory inputs. Four and one-half hours into the session the patient had a positive emotional experience associated with "heavenly" imagery, and stabilized in an elevated affective state for the remainder of the session. The therapist rated positive psychedelic content at 5 on a 0-6 scale. Whenever he experienced pain, he responded in an autosuggestive fashion and pain consciousness would recede. At the end of the session, the patient was in a distinctly elevated affective state.

In the days following this LSD experience, the patient's condition was dramatically changed from a number of perspectives. He neither requested nor required any pain medication. Whereas in the five days prior to LSD he had received 950 mg. of Demerol, he now needed none. His depressive and anxious mental state was replaced by a sense of well being and optimism which was a complete surprise for his wife and the hospital staff. He was eager to leave the hospital and felt that he had discovered "new will power." His general attitude was quite positive and he seemed realistically oriented as to the permanence of his disease. He was discharged to his home five days following the LSD session.

The patient got along fairly well for a period of approximately two months without asking for any opiates, but then needed to be readmitted because of intolerable pain, shortness of breath (from bilateral pleural effusions) and anorexia. The explicit purpose of this admission was for another LSD treatment at the patient's request. For the second treatment, preparation was accomplished in one two-hour interview, and the next day the patient received a total of 200 mcg. of LSD by mouth. He had a psychedelic experience of similar intensity and content to the first.

In the days following LSD he was laert, happy and able to handle his pain without discomfort, but he did complain of moderately severe shortness of breath while walking up and down the hall. The patient was discharged on the tenth day post-LSD in good spirits.

He continued to do well and be comfortable without pain medications for more than six weeks in spite of the progressive course of his neoplasm, but was readmitted because of shortness of breath, pleural effusion, and abdominal pain which radiated from the back and was suspected to be due to retroperitoneal pressure. His liver was noted to be large and tender, and he was given cobalt radiation to that area.

On the eleventh hospital day, this time after three hours of preparation which included his wife, the patient received his third LSD treatment (200 mcg.). His response was again strongly positive and post-LSD he felt much more comfortable, complained less of pain, again tolerating his pain without narcotics, but he had to be readmitted within two months because of severe pain and bilateral pleural effusions. Two separate thoracenteses produced 1200 cc. of fluid each time.

During this admission, the patient received his fourth LSD treatment. This time he was administered 300 mcg. with the objective of obtaining a more profound reaction. During the early phase of the reaction there was more emotional distress than in previous sessions. Nevertheless, the change in mood and outlook was again dramatic with an experience similar to the other three. There was much joyous emotion and the patient "felt like dancing." The love of his wife was uppermost as it had been in the previous sessions. There was also considerable resolution of a long standing resentment which he had harbored toward one of his sons. He displayed the typical psychedelic afterglow, namely freedom of anxiety and expression of a positive mood, feeling very warm and friendly toward people. He later went for a walk on the ward and told the nurse that it was the happiest day of his life. The next day he felt good and was no longer taking any pain medication. There was a considerable reduction in physical distress. He was discharged six days post-LSD without the need for pain relieving drugs.

Unfortunately, the plural effusion rapidly reoccurred and within a week after discharge the patient was readmitted in intractible pain for more drainage of fluid. He was placed on analgesic therapy, but continued on a rapid down-hill course. He died 20 days after his last LSD treatment from acute intestinal obstruction.

Several months after the patient's death, the therapist received a note from the patient's wife, expressing her appreciation for what had been done to make more meaningful the last months of her husband's life. She felt that the last six months had been made much more liveable for both the patient and herself in a human sense because of the LSD treatment.

This case is particularly important since the patient was treated on four separate occasions over a six-month period. This allowed for a prolonged observation of the

impact of psychedelic psychotherapy on a patient treated fairly early in Stage II. (He died unexpectedly in Stage III from a complication.) The reference to each psychedelic treatment provided substantial relief, and the patient's life adjustment during this entire period was markedly benefited. During the whole course of therapy, discussions concerning the patient's medical state were limited to the fact that his condition was "chronic," and that the aim was to achieve the most satisfaction from each day despite the illness.

In distinction to the above patient (D-2), whom we came to classify in Stage II, the next patient (D-3), was in the most advanced stage (III). The marked physical debilitation of the patient and her great distress led the surgeon to suggest this experimental treatment. The therapist was introduced to the patient and preparation began, but she was in such persistent anguish that it was impossible for her to concentrate or read any literature. It seemed problematic whether she ever developed any real comprehension of what the treatment involved. Despite many misgivings and because of the desperate nature of the situation and the lack of experience at this time as to what might be achieved, the treatment was undertaken.

Case D-3: This 56-year-old, white, married Protestant female was diagnosed four years prior to LSD as having cancer of the uterine cervix with abdominal metastases. She was treated at that time with radium implantation and cobalt irradiation. She did relatively well following her discharge for four years until the development of increasingly severe suprapubic pain which radiated to the small of the back, but was at first able to be controlled with Darvon® compound. At the time of admission the patient described the pain as similar to that of advanced labor and followed by the expulsion of bloody clots from her vagina. There was no history of anorexia, nausea, vomiting, or weight loss. She complained of severe gas pains and persistent diarrhea. On physical examination there was tenderness in the recto-vaginal area and pain in the left leg.

By the time she was evaluated for LSD therapy she was definitely in a terminal state. She was extremely debilitated physically and was noted to be both agitated and depressed. Her severe pain was being treated with various narcotics, including Demerol and Morphine. Chemotherapeutic treatment had been attempted with drugs via an intra-arterial catheter placed in her lower aorta via the inferior epigastric artery. Because of urinary incontinence, she had an indwelling Foley catheter. Her diarrhea was a continuing problem as was uncontrolled nausea. Intermittently she passed bloody, necrotic material from her vagina.

In preparation for the LSD session over nine days, the patient was seen for a total of seven hours. Her general weakness and nearly continuous intense discomfort made preparation very difficult. She was not strong enough to read the LSD descriptive literature. It was not at all clear that she understood what was explained to her, but reasonable rapport was established, and the patient seemed positively disposed to proceed with the LSD intervention.

After her regular Demerol administration on the morning of her session day the patient was given 100 mcg. of LSD by mouth, followed by 100 mcg. one hour later. The onset of the drug effect coincided with an attack of uncontrollable diarrhea and intense gas pains. The patient then soiled the bed and was repeatedly unable to control her bowels throughout the day, each such instance being associated with intense discomfort and distress. The diarrhea, along with the patient's general weakness, compromised her ability to enter into the LSD experience. There were, however, some periods of drug-stimulated emotionality and apparent resolution of conflict areas, but the hoped for positive emotional state was not achieved. Positive psychedelic content was rated by the therapist as very slight (1 on the 0-6 point scale). Because of the exhaustion of the patient, the drug effects were shut down at 6:30 in the evening with 50 mg. of intramuscular chlorpromazine. The patient gradually dropped off to sleep and the next day reported a good night's rest.

In the days following the treatment, her general psychological condition seemed improved, and she was considerably more relaxed. The therapist visited the patient four or five times per week, and the strong emotional bond between them could be best expressed non-verbally by a squeeze of the hand.

The other family members also responded to the therapist by sharing their concern and psychological pain with him as the patient's physical condition steadily worsened. Her diarrhea was still not under control and her physical distress, which was great, predominated in the patient's consciousness. There was no reduction in the patient's need for narcotics after LSD. Twenty-two days after the LSD experience the patient sank into a stuperous condition and expired.

This case emphasizes the extreme difficulties in attempting to initiate psychedelic psychotherapy when the patient is in an advanced stage of terminal illness. However, the experience with this case indicated that the LSD apparently did not aggravate the patient's physical state.

The next patient (D-4) was referred by the surgeon because of her agitated depression. The patient interpreted a psychotherapeutic approach as related to her persistent centrally-activated nausea which she hoped was being considered as psychological. She had had extensive experience with psychiatric treatment in the past as the result of a severe neurotic state which her husband had suffered from over the years. She related quite easily to the therapeutic preparation.

Case D-4: Three years prior to LSD treatment, this 48-year-old white, married, Jewish female had a routine

chest film which disclosed a mass in her right lung. A thoracotomy with biopsy then revealed a diagnosis of malignant adenocarcinoma with metastatic involvement of the nodes in the mediastinum. Since that time she had numerous courses of radiation therapy to her chest and metastatic sites. The most painful of her multiple bony metastases were those to her sacrum and lower lumbar spine. Brain metastases to her right frontal lobe became known as a result of a generalized convulsive episode. Radiation treatment to this area caused alopecia totalis. On August 1, 1966, the patient returned to the hospital for the 18th time because of pain in her right side and upper respiratory infection with cough of one week's duration.

When first evaluated for LSD therapy, she complained of chest pain and malaise and was severely depressed. At that time she was receiving only a small amount of narcotics for control of her pain. Although in physical and emotional distress because of her condition, she was able to relate well on an interpersonal level.

In preparation for LSD, the patient was seen over a 10-day period for a total of seven and one-half hours plus members of her family for two hours. The patient had only vague information about the nature of her condition and this area was not openly discussed. However, the thinking relating to her recent depressed state of mind was reviewed in detail. Also discussed was the feeling about the significant figures in her life. Considerable attention was devoted to the area of religion and its meaningfulness as a source of strength since the patient had indicated her feelings in this area.

On the session day, the patient received 100 mcg. of LSD followed by an additional 100 mcg. one hour later. Except for periods of intense nausea (her feelings of nausea had become chronic) the session was essentially without turbulence and the patient tolerated and cooperated with the procedures extremely well. During the session, numerous episodes of strongly positive feelings for members of her family—alive and dead—were expressed, often associated with prolonged cathartic weeping. While she was able to achieve several periods of peak or transcendental experience (feeling close to God), her general exhaustion and re-onset of continuous nausea made it impossible to stabilize an elevated emotional state. Nevertheless, when the session terminated she was in relatively good spirits and had a very meaningful reunion with her husband.

In the days following the LSD experience, the patient appeared to have integrated the insights of her session very well. Her depression had definitely subsided and her emotional state was relatively serene in view of the persistence of her physical symptoms. She left the hospital on the fifth post-LSD day. A month later her surgeon indicated that she was apparently getting along without too much discomfort, although her illness was continuing to progress.

Within three months after her LSD treatment, her physical condition had deteriorated to a terminal condition with increased pain and general distress particularly because of the nausea and pain. Her emotional state was again one of depression, but she related warmly to her LSD therapist, who saw her for two hours in preparation for her second LSD session.

When the patient received a total of 200 mcg. of LSD by mouth, she again had a predominantly positive experience except for distress due to her nausea. At one point she shared with considerable relief a strong feeling of assurance that her ultimate destiny was in God's hands. Positive psychedelic content was judged to be present, but not as much as during the first session (scored 3 on a 0-6 point scale). Because of her physical weakness, the experience was stopped with 50 mg. of intramuscular chlorpromazine in the afternoon after she had experienced the drug's effects for eight hours.

In the days following the experience she did not have the same afterglow as the first time and relief from her depression was not as marked, but she felt that the experience had been worthwhile for her. There was no change in the amount of narcotics needed for control of pain. Her physical condition continued to deteriorate markedly and she died 38 days after her last LSD treatment.

Again, there appeared to be no indication that the LSD had any adverse effect on the patient's physical state. It can be seen that while the patient was obtaining beneficial psychological effects in the second stage, during the third stage when she was in a great deal of agony and progressing down-hill very rapidly, the attempt at psychedelic therapy was going against the tide of her developing malignancy.

Case D-5: This 43-year-old white, married Protestant male was seen by a urologist 11 months prior to LSD treatment, because of hematuria and flank pain. Cystoscopy revealed a bladder tumor which was diagnosed on biopsy as a transitional cell carcinoma. The patient was treated with transurethral resection and fulguration followed by a course of x-ray therapy. In February, 1966, a total cystetomy and bilateral ureterosigmoidostomy was performed. In October, 1966, the patient returned to the hospital because of intractable pain in the neck and shoulder. X-rays revealed metastases in the thoracic and lumbar spine and in the left scapula.

When first evaluated for LSD therapy, the patient was lying in a fetal position, sweating profusely and in obviously severe pain. A number of medications in various combinations had been tried for relief of his severe discomfort. These included morphine, Demerol, Dilaudid, Pantopon, Phenergan, Thorazine, Tuinal, and phenobarbital. To avoid antagonism to the LSD effect, all phenothiazines were discontinued five days before LSD, and his only medications were an average daily dose of 10.8 mg. of Pantopon for pain, plus 200 mg. of Tuinal for sleep. A complicating problem was the patient's difficulty with liquid diarrhea which he could not control. An indwelling tube was only partially successful in dealing with this condition.

In preparation for LSD, the patient was seen for a total of seven hours (5 interviews) and his family members (wife, mother, cousin and niece) for a total of four

hours. Some of this time overlapped when the patient and his family were seen together in group discussions, but the severity and weakness of the patient's condition made this kind of interaction limited. The minister of the patient was also seen, and his cooperation was helpful through his support to the patient both before and after the LSD day. Preparation was deemed only partially successful because of the patient's deteriorating condition. His severe discomfort, both from the pain and almost constant diarrhea made concentration difficult. It was felt by the therapist that the patient only partially understood what the treatment hoped to accomplish, but enough rapport and trust was established to make the treatment at least feasible.

The patient was given 300 mcg. of LSD intramuscularly in a single administration. During most of the session the patient was very peaceful and when contacted periodically gave indications that he was in no distress. After about four hours, the session had to be interrupted to change the patient's bed because of malfunction of his rectal tube. Moving him caused some pain in his shoulder, but he was able to go back deeply into the music and again was quite peaceful. He expressed deep feelings of love for his wife and two sons when he looked at their pictures. Eight hours after administration, his bed again had to be changed and he complained of more severe pain when moved. In the evening his wife, cousin, and niece visited him. He told his wife that he loved her. This verbal communication of feeling was quite moving for his wife because in twenty years of marriage he had not expressed himself this way before. She explained that he had always been a man of few words, but that their relationship had been close in a non-verbal way.

The next day the patient seemed disappointed because he still had pain. In the week following treatment the patient seemed more peaceful and relaxed. The nurses commented that he seemed less demanding and easier to care for. At times he would be asleep when his scheduled pain medication was available. His actual use of pain medication was about one-half that required in the week preceding LSD. Two nights after the LSD treatment day, the patient reported that he had the best night's sleep that he had had since coming to the hospital.

The patient was judged not to have had a peak psychedelic experience. Positive psychedelic content was rated only two on a 0-6 point scale by the therapist. There was not much positive afterglow effect. He was not in psychological distress during or after the treatment. Much of his experience seemed contentless, but very peaceful. The patient did not raise the question of his diagnosis or prognosis at any time during the preparation, treatment or follow-up. His wife was unwilling to bring up the issue with him. The patient refused to let his boys visit and "see me like this." After the treatment, his wife, however, was able to tell her sons (ages 12 and 14) for the first time that their father "would not be coming home." She received support from the family minister in this painful decision.

The patient continued on a steady downhill course and was transferred to a VA hospital thrity-six days after his LSD treatment. Two days later he died.

Treatment was given late in the terminal phase and the effects of LSD seemed to be partially blocked by the many medications, including phenothiazines, on which the patient was being maintained.

Case D-6: The patient, a 58-year-old Jewish, married, female had suffered from cancer of the breast for 12 years. In spite of numerous surgical and medical procedures including hysterectomy, ovarectomy, and adrenalectomy, the disease had spread widely in her spine. At the time she was referred for LSD treatment, pressure on nerves in her spine had caused numbness and a paralysis of the lower half of her body. When first interviewed, the patient was anxious and depressed.

After six hours of preparatory psychotherapy with the patient and her family over the period of a week, during which the nature and purpose of the treatment was explained, the patient was given 300 mcg. of LSD. The first few hours of her psychedelic session went well and were pleasant, but a complete psychedelic-peak experience was not obtained. There were a few moments of intense positive psychedelic reactivity; for example, at one point the patient exclaimed, "This is one of the happiest days of my life. I will always remember it." There were also transient episodes of apprehension, confusion, and paranoia which were easily handled by reassurance and support.

During the latter part of the session, the patient raised the question of whether or not she would walk again. This issue was handled by a realistic review of the patient's condition, and the therapist finally stated in a direct answer to her question that it was very unlikely that she would be able to walk again. The patient then expressed her reluctant acceptance of the idea that her life could go on even if she were confined to bed, a condition which she had previously greatly feared. However, the patient spontaneously expressed her determination to try her best in physiotherapy, in spite of the odds against her. She was supported in her resolve to try, but also discussed was acceptance of her condition, if it could not be improved. During the evening after the patient had emerged from the effects of the drug, the patient's family visited. This was a time of intense closeness and interpersonal sharing. The family remarked on the change in her mental condition from that of anxiety and depression to one of peace and joy.

In the days after the session the patient's mood was cheerful and hopeful. Upon discharge from the hospital six days after her LSD treatment, the patient returned home and began intensive work with a physiotherapist. She made remarkable, quite unexpected progress and within four months was able to use a walker. Six months after treatment the patient was doing some limited walking with a cane.

In spite of her impressive accomplishments, the patient again became depressed and difficult to manage at home because of her feelings that she would always be an invalid. She was especially distressed because the back-brace which she had to wear out of bed (four to six

hours a day) was cumbersome and she needed assistance by another person in order to put it on. Because of her increasing depression, both the patient and her family requested another LSD treatment. She was seen regularly for preparation. Interpersonal relations, her self-concept, and some realistic expectations for the future were the major issues explored.

Ten months after her first session the patient was readmitted to the hospital for her second LSD treatment. Her initial reaction to the session was one of anxiety, and then the issue of her disease was encountered. She faced the fact that throughout her illness she had tended to deny that she was really sick. She remembered patients she had known with cancer, and her fear of decaying flesh was symbolized by visions of vultures feeding on rotten meat. After confronting rather than retreating from these unpleasant feelings and experiences, the patient had the experience of passing through a series of blue curtains or veils. On the other side she felt as if she were a bird in the sky soaring through the air. Then she was on a high mountain top in a small cabin alone with the snow falling. She experienced wonderful feelings of peace and harmony and visions of beautiful colors like the rainbow. After this, she stabilized the experiences and had an enjoyable reliving of happy memories from her past, the best of which was her wedding day, which she relived in great detail including a reexperience of the way her mother sighed as she came down the aisle. These happy memories were in contrast to the early part of her experience when she had relived some unpleasant events such as the prejudice she felt against her as a child because she was Jewish and her failure to take advantage of the cultural opportunities her father had provided. In the latter part of the experience the patient thought deeply about her family while looking at their pictures. She was able to resolve some of the ambivalence she had about her younger daughter who was to be married in three months. She felt sorry for some of the strife they had had and came out of the experience with a resolve to make a more constructive attempt to relate to this girl in the future. When the patient's family arrived after supper, she had a serene smile on her face, but was reluctant to talk about her experience too much. She said, "You wouldn't believe me if I did tell you."

Subsequently, the patient left the hospital in good spirits and was able to participate actively in her daughter's wedding. She fulfilled her desire to walk down the aisle without the aid of even a cane, and during the wedding reception she amazed all the guests by dancing with her husband. Her sister said she had been the life of the party.

Within six months the patient requested a third LSD treatment. At this time she had increasing pain and was discouraged because she had not worked in over two years although she had kept the hope alive that she would eventually return to her old job. The session began smoothly but the patient became frightened when she saw a huge wall of flames. After support and encouragement by the therapist, the patient was able to go through the middle of the flames, and at this point experienced positive ego transcendence. She felt that she had left her body, was in another world, and was in the presence of God which seemed symbolized by a huge diamond-shaped iridescent Presence. She did not see Him as a Person but knew He was there. The feeling was one of awe and reverence, and she was filled with a sense of peace and freedom. Because she was free from her body, she felt no pain at all. She was quiet during most of the day and emerged from the session with a deep feeling of peace and joy. When her family had arrived, she radiated a psychedelic afterglow of peace and beauty which all remarked upon. During the course of the evening the patient had a serious talk with her daughters about her condition and what might lie ahead. Shortly thereafter the patient was discharged from the hospital in good spirits. One effect of the treatment was that when the patient was troubled with pain, she could push the pain out of her mind by remembering her out-of-the-body LSD experience.

The patient did very well for about one month, until she slipped on the stairs one day and injured her back, which began causing her considerable pain again. She also became sick with influenza and was confined to bed. Prior to this she had been considering going back to work at her old job, part-time, but with the worsening of her physical condition these plans had to be postponed. With these physical setbacks and especially the recurrence of her pain, the patient again became somewhat depressed. Both the patient and her family requested another LSD treatment. The patient was seen weekly for about a month as an outpatient and then readmitted for a treatment with LSD, almost six months after her third treatment.

The evening before her session, during the final preparation, the patient suddenly asked a direct question about her diagnosis for the first time in the almost two years she had been in the LSD-treatment program. Although she knew that her breast had been removed for a tumor, she had believed there was no further growth, but the increasing pain in her back had made her wonder. Her questions were answered gently, but without evasion, and the meaning and emotional impact were discussed with her. The family members were informed of this conversation immediately thereafter, and they reacted by becoming quite upset and angry. That very evening, in a general family discussion with the patient and therapist, however, most of them were able to resolve their feelings. Some felt embarrassed because of their previous pretense; most felt relieved when they saw how well the patient had dealt with the situation. The patient stated that she was glad to know the truth and was obviously not psychologically shattered or further depressed as some of the family members had feared.

The fourth session the next day went smoothly, except for the reliving of nausea which had been experienced shortly before admission when she had eaten some spoiled food. Much psychodynamic material emerged concerning her feelings about various members of her family, especially her two daughters. In the evening the patient felt very close to her family and spent some time in talking to each of them alone in a very personal way. She was reluctant to have them leave at the end of the evening, even though she was very tired. In the days

after the session the patient felt relaxed and in good spirits. She was not pessimistic about the future, in spite of the new knowledge about the diagnosis of metastatic cancer of the spine. She was able to tolerate the pain in the back with the aid of narcotic drugs, but did not have complete relief from pain.

While still in the hospital, an hypophysectomy was attempted as a possible means to stop further spread of her metastatic process. Because of hemorrhage the operation could not be completed, and the patient died a few days thereafter.

This patient experienced considerable relief from pain, depression, and anxiety over the period of almost two years during which she received four LSD treatments. Her first session was not judged to have had much psychedelic content, but the second, third, and fourth sessions did. The third session was the most complete psychedelic-peak experience and seemed to provide the most benefit. This patient's gratifying physical improvement can be attributed only indirectly to the LSD treatment in that her own underlying resolution to pursue physiotherapy emerged when her depression and anxiety were relieved. By a fortunate coincidence, her condition responded well to these efforts on her part, contrary to the most informed medical prognosis. All our patients are told that LSD is for treatment of psychological distress and not a cure for their physical disease. In this case, as happens not infrequently, sometime during the course of LSD treatment the issue of diagnosis was brought up by the patient and had to be worked out with the patient and the family.

SUMMARY OF RESULTS

The preceding six case histories are summarized in Table 1. Columns 2, 3, 4, and 5 show age, kind of cancer, metastatic spread, and stage of the disease. All these patients had metastases and were at least in Stage II. The therapists' evaluations of positive psychedelic content in Column 6 were based on an evaluation by the therapist of the subjective experience reported by and observed in the patient, and was scored on the 7-point scale as outlined in footnote** to Table 1. Such phenomenological ratings are heavily dependent on the therapist's experience in observing such reactions, but we have found a range of no more than + or − 1 in inter-rater reliability from our experience thus far. Admittedly this is a crude instrument for attempting to measure internal subjective experiences and, hopefully, more objective measures can be developed so that the correlation between type of LSD experience and treatment outcome can be evaluated more adequately.

Outcome evaluation focused on two parameters: (1) the amount of pain medications required pre- and post-LSD as shown in Column 8 of Table 1; and, (2) average global eevaluations of the change in the patient's condition as shown in Column 7. In regard to the first, a narcotic scale of equivalent dosages (see footnote**** for Table 1) was developed so that the unit equivalents of the various pain medications used before LSD was always compared to the same length of time after LSD for any one patient. These periods ranged from 2 to 7 days between different patients because some patients were discharged within two days after LSD. Such estimations of narcotic usage must remain rough indications only because of other variables which were uncontrolled at this point. Nevertheless, a decreased need for narcotics can be seen in some of the patients. However, analgesia alone would not justify the large expenditure of effort required for LSD treatment. In regard to the second parameter, the change in the patient's condition included an estimate of closeness and openness in interpersonal relationships with family and others, ease in medical management, mood, state of relaxation and comfort, and sense of well-being. These changes were evaluated from the viewpoint of the attending physicians, the nurses, the LSD therapist, and the patient's family, on the 0-6 point scale defined in footnote*** from Table 1. The changes in the direction of improvement for this small group were encouraging.

The intervals treatments in those patients who had more than one are shown in Column 9 of Table 1 and the responses obtained can be compared. It should be noted that the preparation required for repeat sessions was much less than for the initial one. Rapport had already been established and the patient had an idea of what to expect. Usually not so much fear (e.g., of "going crazy") was present.

Table 2, "Influence of the Stages of Disease on the Effect of Treatment In the First Six Cancer Patients Receiving Psychedelic Psychotherapy with LSD," is suggestive. It appears likely that the earlier the treatment is initiated, the more beneficial is the total result over time, and the better the chance for a maximally positive psychedelic reaction. However, from the 6 cases shown, these observations must be considered as trends only.

Subsequent to our initial pilot study with the six patients described here, we have continued our research in this area (8, 13). Thus far, we have treated 33 more cancer patients. Results consistently have shown very dramatic positive changes in global adjustment in about 1/3 of the cases, significant beneficial changes in another 1/3, and no change in 1/3. Again, the sicker and more terminal patients seemed to show the least benefit, thus strengthening our early, still tentative, impression that

TABLE 1

DATA SUMMARY OF PSYCHEDELIC THERAPY WITH CANCER PATIENTS

1	2	3	4	5	6	7	8		9
Pt.	Age	Primary Cancer	Metastases	Stage of Disease* (I to III)	Positive Psychedelic Content** (0 - 6)	Average Global Change in Pt.*** (−6 to +6)	Narcotics Av. Amt./Day **** Pre-	Post-	Interval Between Treatments (Days)
D-1†	42	Breast	Liver	II	5	+4.9	0	0	—
D-2†	65	Lympho-sarcoma	Lung	II	5	+6	3.8	0	—
				II	5	+5.2	3.0	0	76
				II	5	+6	3.0	0	67
				III	5	+4	3.7	0	68
D-3†	56	Cervix	Abdomen	III	1	+1.8	0.9	0.1	—
D-4†	48	R. Lung	Lymph nodes,	II	4	+3.8	0.2	0.2	—
			Bone Brain	III	3	+1.2	3.6	3.5	94
D-5†	43	Bladder	L. scapula Spine	III	2	+1.5	10.8	4.9	—
D-6†	57	Breast	Spine	II	3	+3	5.2	2.1	—
				II	5	+4.1	0	0	320
				II	6	+4.5	2.3	0	181

†Indicates patient deceased.

*Explanation of Stages (Weisman's Classification)#

Stage I—The initial stage of reduced alternatives
Stage II—The intermediate stage of middle knowledge
Stage III—The terminal stage of counter control and cessation

**0-6 Scale of Positive Psychedelic Content based on amount of:

a. Sense of unity or oneness: (positive ego transcendence, loss of usual sense of self without loss of consciousness).
b. Transcendence of time and space.
c. Deeply felt positive mood (joy, peace, and love).
d. Sense of awesomeness and reverence.
e. Meaningfulness of psychological and/or philosophical insight.
f. Ineffability (sense of difficulty in communicating the experience by verbal description).

0—None
1—Very slight
2—Slight
3—Somewhat
4—Moderate
5—Marked
6—Very marked (most complete psychedelic peak experience)

***Average change via ratings made by attending physicians, nurses, family and LSD therapist, considering depression, psychological isolation, anxiety, difficulty in management for all physical complaints, tension, and pain on ±6 scale with the same graduations as above in footnote**.

****Amount of narcotics used is based on the following Narcotic Scale of Equivalent Dosages:

Numorphan	1 mg.	All these dosages are assigned on equivalent value of 1 (one) point.
Dilaudid	2 mg.	
Demerol	50 mg.	
Codeine	30 mg.	
Morphine	8 mg.	
Methadone	5 mg.	
Pantopon	10 mg.	
Percodan	1 tablet	

#Weisman, A. D. A Psychiatrist's View: Death & Responsibility. *Psychiatric Opinion*, 3: 22-26; 1966. Feb. 15-17, 1967, N.Y.C.

Weisman, A. D. Appropriate Death. *International J. Psychiatry*, 2: 190-193; 1966.

Weisman, A. D. Denial as a Factor in Patients with Heart Disease and Cancer. Conference on Care of Patients with Fatal Illness, Feb. 15-17, 1967. *N. Y. Acad. of Sciences.*

the earlier a case is treated in the course of the disease the better. None of the patients, even the most ill, appeared to have been harmed by the procedure.

DISCUSSION

The existential exhortation to face death with courage has been of little comfort to the dying patient or his doctor. The majority of dying patients are still faced with the grim picture of increasing pain and anxiety with the ultimate disintegration and degradation of the personality. Furthermore, with the decline of traditional values and beliefs concerning death, there has developed the prolongation of life through better medical care. Consequently, increasing numbers of people now die of lingering, painful diseases, such as cancer. Heroic treatment measures, in effect, prolong these final sufferings. However, the ultimate failure of these costly efforts often results in an increase in distress for all concerned.

The publication of Feifel's book, *The Meaning of Death*, in 1959, crystalized a considerable amount of thought and research on this issue (14). Unfortunately, not much improvement in clinical method or technique with terminal patients has resulted. The majority of

TABLE 2

INFLUENCE OF STAGE OF DISEASE ON THE EFFECT OF TREATMENT OF FIRST SIX CANCER PATIENTS RECEIVING PSYCHEDELIC PSYCHOTHERAPY WITH LSD

Stage	Number of Treatments	Average Global Evaluation of Change in Patient per Session (-6 to +6)*	Average Psychedelic Content in LSD Experience Per Session (0-6)**
II	9	+4.5	4.4
III	4	+2.1	2.8

*See footnote *** for Table I.

**See footnote ** for Table I.

dying patients are still faced with the picture described by Aldous Huxley as "increasing pain, increasing anxiety, increasing morphine, increasing addiction, increasing demandingness, with the ultimate disintegration of the personality and a loss of the opportunity to die with dignity" (15). In February, 1967 a New York Academy of Sciences Conference on "Care of Patients with Fatal Illness," had little additional guidance to provide. The need for more effective communication, however, was stressed.

There are many questions concerning the psychological influence of the positive psychedelic peak experience and its impact on anxiety, apprehension, and depression. Although the psychological mechanisms underlying such changes need much more study, one factor which appears to make this experience so meaningful to the patient is the profound sense of fulfillment which resolves the intense feeling of unfinished business and its accompanying frustrations. There is the appearance of a positive mood state characterized by joy, peace, and love. There is less worry about the future (sometimes even about death itself) and at the same time an increased willingness and ability to live each moment fully for the here and now. Another possible result is an increased openness and honesty which can have an important impact on interpersonal relationships at this critical time. The experience of alert consciousness unsedated by narcotics can be more than just a pain-free interval, i.e., it can enhance the opportunities for interaction with those he loves the most.

Times of death are times of crisis in any family. Psychiatrists are well acquainted with the crucial importance of how any person reacts to and integrates the death of an important emotional figure. Here we have striking opportunities to practice preventative psychiatry. We can be present as a healing force in the actual situation which will be carried in the emotional memory of those who live on. How many patients have we known who carry emotional scars from poorly handled traumas of this kind? By adequate family therapy we have the possibility to ease the agony of death for the one who dies and at the same time to help the rest of the family absorb this deep hurt in a healthy way. The experience seems to mobilize much positive affect not only from the patient who receives the LSD, but also in other family members who react to the whole treatment procedure at many psychological levels of their own.

Despite these encouraging developments, there are many unanswered problems that must be solved and which can only be worked out by careful, thorough, well-controlled studies. Furthermore, it should be clearly evident that LSD psychedelic treatment, in the patient confronted with a fatal illness, is not a simple chemotherapy, nor does it provide therapeutic magic. LSD alone is not a substitute for the best of sensitive and skilled psychotherapy, but may offer some advantages over usual procedures in the kinds of patients whom we have treated. We would definitely not advise its use without specialized training under supervision from those already familiar with the reactions facilitated by this very powerful psychoactive drug. Our clinical experience in utilizing the psychedelic procedure in the treatment of selected alcoholic and neurotic patients has led to a relatively safe procedure which may be highly promising for patients facing fatal illness if implemented in the context of brief, intensive, and highly specialized psychotherapy catalized by a psychedelic drug such as LSD.

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