

**DPT AS AN ADJUNCT IN
BRIEF PSYCHOTHERAPY
WITH CANCER PATIENTS**

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ABSTRACT

Thirty cancer patients suffering from psychological distress participated in a pilot project of individual psychotherapy that offered — over a four week period of time — approximately twelve hours of conventional verbal interaction and a single intensive drug-assisted therapy session that employed dipropyltryptamine (DPT), a short-acting psychedelic drug. The efficacy of the total therapeutic approach in enhancing the quality of life is indicated by the analysis of data from psychological tests and independent ratings completed before and after the treatment intervention. The relative merits of DPT in comparison with LSD and the need to pursue a controlled study are discussed.

Building upon investigations at the Maryland Psychiatric Research Center into the promise of LSD as an adjunct to brief psychotherapy with terminal cancer patients suffering from psychological and physical distress [1–5], we have initially explored the usefulness of dipropyltryptamine (DPT) as an alternative to LSD. A literature survey of new psychotropic agents that might prove to be shorter-acting and less controversial than LSD, while having similar potential for facilitating psychotherapy, led us to studies by Szara and his colleagues of a

group of tryptamine derivatives [6-9]. Szara had begun his studies in 1955, after learning about the chemical analysis of *cohoba*, a snuff powder prepared from *Piptadenia peregrina* seeds, that has been used by Haitian natives in religious ceremonies to induce altered states of consciousness. After synthesizing and testing thirteen tryptamine derivatives, he found that three compounds were psychoactive: dimethyltryptamine (DMT), diethyltryptamine (DET) and dipropyltryptamine (DPT) [10].

As we theorized that the duration of DMT and DET might prove to be too brief for psychotherapeutic utilization, and there were reports that unpleasant autonomic side-effects might be more probable with these two substances than with DPT, we decided to investigate the use of DPT in pilot projects with alcoholics [11-12] and cancer patients. Our findings, employing DPT as an adjunct to brief psychotherapy with thirty cancer patients, are presented in this article.

METHOD

Selection Criteria and Sample Description

Most participants were referred by the oncology service of Sinai Hospital in Baltimore under the direction of Louis E. Goodman. Screening criteria included:

1. the presence of psychological distress, defined as depression, anxiety and/or psychological isolation;
2. an estimated prognosis of at least three months of life;
3. absence of brain metastases, organic brain disease, or other central nervous system involvement;
4. absence of recent history of myocardial infarction or imminent danger of cardiovascular accident; and
5. absence of current psychosis or history of chronic psychosis.

Of the total sample ($N = 30$), 33 per cent were male and 67 per cent female; 50 per cent were Negro and 50 per cent Caucasian. Ages ranged from twenty-four to seventy-one with a mean of 52.6 years. The length of formal education ranged from four to eighteen years with a mean of 11.1. In regard to religious background, 53 per cent of the sample were Protestant and the remainder was divided evenly between the Catholic and Jewish heritages. Seventy-three per cent of the participants were married.

At the time of screening, participants were classified in terms of Weisman's three stages of disease [13]. Of the total sample, only 7 per cent qualified for Stage I, "the initial stage of reduced alternatives"; 63 per cent were judged to be in Stage II, "the intermediate stage of middle knowledge," and 30 per cent were classified in Stage III, "the terminal stage of counter-control and cessation." When initially referred, 63 per cent of the sample were able to verbalize diagnosis.

The primary locations of cancer for the sample may be outlined as follows: breast, 10 per cent; respiratory system, 16 per cent; digestive system, 37 per cent; genito-urinary system, 20 per cent; lymph system, 7 per cent; and skin (malignant melanoma), 10 per cent.

The initial motivation of patients to participate in the brief psychotherapy being offered varied markedly. Some persons explicitly requested to be included in the study; others appeared to be responding primarily to the recommendation of their referring physician and expressed a willingness to try a new "treatment" that might prove helpful in coping with physical pain and/or emotional distress. In the screening interview, all prospective participants were informed that the experimental drug-assisted psychotherapy was not offered as a direct treatment for their physical condition, but rather was offered to help them cope with it more effectively. It also was explained that the procedure was being studied in a research framework and that no charge would be made to the patient for participation, above and beyond the usual hospital costs for room and board if required. Questions regarding the safety and efficacy of DPT were discussed openly on the basis of the available data.

Most participants gave their consent quite readily, being appreciative of the offer of any procedure that might help to mitigate their suffering. A few people expressed a desire to discuss the matter with other physicians and their families prior to giving consent and were encouraged to do so. Only one patient declined to participate.

Data Collection

Following the screening interview and preceding the first meeting with the therapist, each new patient in the study was interviewed by two independent raters and visited by a research assistant who administered two psychological tests. This assessment procedure was repeated approximately four weeks later, one week following the DPT-assisted therapy session.

The independent raters were two male social workers, neither of whom had been involved in previous research with this form of psychotherapy. Criteria for selection of the raters included an absence of strong bias either for or against the use of psychedelic drugs, skill in making clinical judgements, the ability to rapidly establish rapport with a variety of people, and the emotional maturity prerequisite for work with dying persons and their families. At the time of employment, Rater A was a married, Negro, Baptist man who had encountered no personal experiences with death other than the death of his great grandmother; Rater B, in contrast, was a single, Caucasian, Catholic man whose father had died of leukemia.

It was posited that the combined judgements of these two social workers, interviewing together and rating the same sample of behavior, would prove to be a more accurate index of the psychological status of a patient than either of their

judgements alone. The decision to employ social workers as independent raters was based on the frequent necessity of making home visits, often during evenings or on weekends, in order to obtain the necessary data, and on a previously unsuccessful experience in which a physician had been hired to make the same ratings, but failed to do so when the patient was not readily accessible. Similarly, prior experience, first with a female social worker and then with a female nurse as independent rater also had proved unsatisfactory, partially because of the occasional necessity of making home visits in ghetto-like areas of the city.

Following the joint interview with the patient, each rater privately recorded his judgements on the Emotional Condition Rating Scale (ECRS). This instrument, published elsewhere [3], was designed by Pahnke and Richards in 1967 and served as the primary research tool during the early stages of this research program. It includes seven scales: Depression, Psychological Isolation, Anxiety, Difficulty in Medical Management; Denial of the Possible Imminence of Death, Fear of Death, and Preoccupation with Pain. Each variable is rated on a thirteen-point interval scale that ranges from minus six to plus six. The psychological tests employed were the Mini-Mult and the Personal Orientation Inventory (POI). Although the tests had to be read aloud to some participants by the research assistant in order to obtain the data, it did prove possible to obtain the results of both tests from most subjects at both testing periods.

Prior to the design of this study, we had attempted to obtain the complete Minnesota Multiphasic Personality Inventory (MMPI) from terminal cancer patients. Due to physical exhaustion and difficulty with prolonged concentration, however, many patients had been found unable to cooperate with the procedure. Also, when the complete MMPI had been obtained before therapy, it occasionally had been impossible to obtain it again at a subsequent point of assessment due to the progression of the cancer during the intervening period. Thus, the Mini-Mult [14], an abbreviated form of the MMPI, was viewed as a promising, if less than ideal, alternative. The POI [15], based upon Maslow's concept of the "self-actualizing" person, was included to provide an index of psychological health or positive development of the personality.

Psychotherapeutic Procedures

Therapy usually was conducted on an individual basis and proceeded in four stages:

1. a mean of ten hours of interaction over a period of from two to three weeks to establish rapport, facilitate the initial resolution of conflicts when possible, and prepare for the DPT session;
2. a single session (mean duration: 6-3/4 hours) of intensive therapy on one day, assisted by the administration of DPT;
3. a mean of 2-1/4 hours of therapy during the week immediately following the DPT-assisted session that focused on initial integration of the content

- of the DPT-assisted session and application of insights contained therein;
and
4. periodic contact during the next three weeks and, when appropriate and desired by the patient, until death occurred.

The six psychotherapists who contributed to the clinical phase of this project all were experienced in the conduct of therapy assisted by psychedelic drugs, and had worked previously with alcoholic and neurotic populations. The therapists generally viewed the DPT-assisted session as a unique psychotherapeutic opportunity, as opposed to a more distant orientation of "trying out" a new psychopharmacological substance. It was assumed that the value of psychedelic drugs in psychotherapy is strongly dependent upon the quality of the interpersonal interaction that precedes, accompanies, and follows the drug administration. As was expressed by Savage and Stolaroff over a decade ago, the therapists realized that, "Contrary to the belief of many investigators, the hallucinogens do not produce experiences, but inhibit repressive mechanisms that ordinarily operate and simply allow people to explore the contents of their own minds." [16]

Therapy before the day of DPT-administration – If issues of diagnosis and probable prognosis had not been clarified prior to the beginning of therapy, these matters were dealt with in as sensitive a manner as possible. Diagnostic or prognostic information never was "forced" on a patient; conversely, under no circumstances did a therapist participate in any plan to consciously deceive a patient, as it was felt that such behavior would inhibit significantly the development of the quality of rapport that was considered prerequisite for an optimal response to DPT.

The therapeutic approaches employed generally were eclectic, being largely determined by the specific needs and problems of each patient. Some persons introduced unresolved material from the past that was troubling them; others focused on their present situation. With some patients the resolution of interpersonal conflicts with family members became a major focus of therapy. In essence, an attempt was made to "meet the patient where he is" and to offer strong support and tempered optimism in confronting and attempting to facilitate resolution of issues that the patient introduced.

One week prior to the administration of DPT, any phenothiazine medication a patient was receiving was discontinued. Otherwise, patients continued to receive narcotic, antibiotic, cytostatic and hormonal medication as usual. A day or two before the administration of DPT, the patient became acquainted with the nurse who would assist and function as a co-therapist during the DPT session. Besides meeting in whatever interpersonal depth was possible, the nurse appraised the medical nursing needs of the patient for which she would take responsibility during the period of drug action.

Usually on the day prior to DPT administration, the range of possible responses to DPT was surveyed in order to mitigate undue anxieties during the DPT session. Typically the metaphor of a journey was employed, and the patient was told that, in the course of his or her "travels," both unpleasant and pleasant experiences might be encountered. The patient was encouraged to accept and explore both negative and positive memories and emotions, and was informed that experiences of emotional suffering in retrospect often had been deemed beneficial by previously-treated patients. In general, emphasis was placed on the patient's psychological strength and assurance was given that, with the support of the therapist and nurse, there was no experience that could not be encountered and explored.

Participants were told that it was not uncommon during the action of DPT for persons to wonder if they ever would return to normal consciousness and were instructed to trust the "arc" of the experience — that the same "force" that carried them deep within themselves also would return them to the everyday world as the drug effect wore off. Following the period of preparatory instructions, participants became accustomed to wearing a sleepshade and listening to music through stereophonic headphones, both of which would be employed during the DPT session.

Of the thirty participants, seventeen received pre-drug therapy as inpatients at Sinai Hospital and thirteen were treated on an outpatient basis. Due to potential medical needs, five of the outpatients were admitted to the hospital on the day prior to DPT administration, whereas eight were able to continue on an outpatient basis and receive the drug in one of the specially-designed treatment suites of the Maryland Psychiatric Research Center.

Therapy on the day of DPT-administration — DPT dosage, determined by both body weight and assessments of psychological resistance, was moderately high. The mean dose was 101.7 mgs.; the dosage median and mode both were 105 mgs.; and the range was from 75 to 127.5 mgs. As DPT is inactive orally, it was administered intramuscularly.

The injection of DPT was administered after a period of conversation, at a time when the patient appeared to be reasonably at ease. As the effects of DPT usually begin within two or three minutes and may be quite intense, the patient was asked to recline on his back (when permitted by the patient's physical condition) following the injection, and was given a sleepshade and pair of stereophonic headphones. The music program was started and either the therapist or nurse usually held the patient's hand as the initial drug effects occurred.

Participants who accepted the nonordinary states of consciousness readily and became engrossed in their experiences usually were not interrupted during the intense part of their sessions. In general, they were encouraged to "collect experiences" and to defer description and discussion of their experiences until

the effect of the drug had abated. Occasionally, the therapist would remove the headphones and sleepshade and give the patient an opportunity to communicate, having previously given instruction to remain silent in such situations if the patient felt that communication would interrupt an important experience that was in process. As the drug effect abated, verbal communication typically increased in frequency.

When feelings were expressed, emotional support was given and the patient was encouraged to explore and express the feelings as completely as possible, irrespective of whether the emotions appeared to be pleasant or unpleasant. It was common in such sessions to find that tears of sadness and anger easily could change to tears of relief and happiness. If a person began to become frightened of emerging psychological material, he or she was firmly enjoined to trust his or her own inner resources and to confront the conflict. In almost all instances when this situation occurred, the patient quickly experienced a sense of resolution and relaxation, and reactions of panic and paranoia were circumvented. For example, if a conflict was symbolized in the form of an ominous mythological creature, the patient was supported in confronting the creature — a procedure that usually led to the transformation of the symbol into a significant person in the patient's life or, most commonly, into the patient himself, accompanied by feelings of resolution and insight.

The music played during the session was selected by the therapist on the basis of his prior experience in the conduct of drug-assisted therapy sessions, and was predominantly classical, both instrumental and choral [17]. Its function was to provide an enhanced sense of continuity and nonverbal support. In retrospect, participants frequently reported a new-found appreciation for forms of music that they would have viewed with disinterest, prior to the DPT-assisted session. The purpose of the sleepshade was to aid the patient in focusing attention on internal processes and to minimize distraction from external visual stimuli.

Transient autonomic effects occurred in some patients that often were reported to have a meaningful subjective component. Episodes of vomiting, for example, usually seemed to be correlated with experiences of psychological catharsis, and typically were followed by reports of increased peacefulness and freedom from feelings such as guilt or anger.

After the drug effects had abated, family members were permitted to interact with the patient in accordance with the judgement of the therapist. Frequently rather poignant and dramatic family interactions took place at this time, and it was not uncommon for the patient to take the lead in counseling the family. When appropriate, young children also were granted permission to visit at this time.

Therapy after the day of DPT-administration — Patients were visited by the therapist on the day immediately after DPT administration and on several occasions during the following week. During this period of time, the patient

usually discussed in detail the experiences of altered consciousness that had occurred. Generally, participants had an intuitive comprehension of the meaning of most of their experiences, but occasionally remained perplexed about specific sequences of images. Through free-association, these people often could be guided towards a recognition of meaning in such sequences.

Primary emphasis was placed on the application to the problems of everyday life of insights gained. Often patients expressed an intensified desire to resolve various interpersonal conflicts and were encouraged to take active steps in that direction.

RESULTS

Statistical Indicators of Efficacy

The ratings made on the Emotional Condition Rating Scale (ECRS) by each of the two independent raters were averaged for each of the seven scales of the instrument, providing seven indices to reflect the combined judgement of the two raters of the patient's condition. This was done on ratings made at two points in time, giving a measure of the patient's emotional condition before therapy began and again one week following DPT administration on each scale of the instrument. The significance of the differences between the pre-treatment and post-treatment means for the sample as a whole on each parameter then was examined statistically by use of the *t*-test. Interrater reliability was calculated by Pearson product-moment correlations and a mean coefficient of .60 was found for the ratings as a whole. Most agreement was found in rating Preoccupation with Pain ($r = .70$); least agreement was found in rating Difficulty of Medical Management ($r = .45$).

As indicated in Table 1, the direction of change was found to be towards decreased distress on each parameter rated. Only the scales of Depression and Anxiety exceeded the .05 level of statistical significance; trends of interest were found on the scales of Preoccupation with Pain ($p < .09$) and Fear of Death ($p < .11$).

The pre- to post-therapy changes manifested by the twenty-seven participants who completed the Mini-Mult, both at the time of referral and one week following the DPT-assisted therapy session were examined by *t*-tests. As presented in Table 2, all of the post-therapy values may be interpreted as indicative of decreased psychological distress. Statistically significant indices of clinical improvement were found on the following Mini-Mult scales: *D*, "depression"; *Hy*, "hypochondriasis"; *Pa*, "paranoia"; *Pt*, "psychasthenia"; *Sc*, "schizophrenia"; and *Ma*, "hypomania." The decreased evaluations on scales *Hy* and *Pt* may largely reflect a lessening of obsessive worries about physical symptoms and a reduction in the intensity of some somatic complaints. The decreased evaluations on the *Sc* scale may be indicative of a lessening in

Table 1. Differences of Mean Scores of Independent Ratings Reflecting the Emotional and Physical Condition of Patients Before and After DPT-Assisted Therapy (N = 30)

<i>Variable</i>	<i>Pre-</i>	<i>Post-</i>	<i>Difference</i>	<i>t</i>	<i>P</i> ≤
Depression	-1.75	.21	1.96	2.31	.03
Psychological Isolation	2.28	2.72	.44	.73	n.s.
Anxiety	-1.85	.30	2.15	2.71	.01
Difficulty of Medical Management	1.00	1.28	.28	.38	n.s.
Denial of Possible Imminence of Death	- .25	.27	.52	.87	n.s.
Fear of Death	-2.27	- .98	1.29	1.67	n.s.
Preoccupation with Pain	-1.45	- .10	1.35	1.75	n.s.

Table 2. Results of *t*-Tests on Mini-Mult Variables for Cancer Patients Who Participated in DPT-Assisted Therapy (N = 27)

<i>Variable</i>	<i>Pre</i>		<i>Post</i>		<i>t</i>	<i>p</i> ≤
	<i>Mean</i>	<i>S.D.</i>	<i>Mean</i>	<i>S.D.</i>		
L	53.6	8.9	53.9	10.2	.15	n.s.
F	57.9	9.9	55.8	6.7	1.18	n.s.
K	51.3	6.7	52.6	8.4	1.05	n.s.
Hs	65.4	13.1	62.5	9.5	1.55	n.s.
D	72.4	12.6	66.7	11.1	3.02	.006
Hy	65.7	9.9	60.9	8.7	3.01	.006
Pd	63.4	11.2	61.7	9.7	.94	n.s.
Pa	62.3	9.0	57.0	9.7	2.71	.01
Pt	63.3	12.3	56.4	12.0	3.23	.004
Sc	67.0	13.2	56.3	10.8	4.11	.001
Ma	59.1	9.8	54.9	6.8	2.37	.02

Table 3. Results of *t*-Tests on POI Variables for Cancer Patients Who Participated in DPT-Assisted Therapy (N = 28)

Variable	Pre		Post		<i>t</i>	<i>p</i> ≤
	Mean	S.D.	Mean	S.D.		
Time Competency	35.1	11.1	40.3	12.0	2.22	.03
Inner Directedness	41.6	9.3	46.1	8.8	2.75	.01
Self-Actualizing Values	44.7	14.3	47.7	12.2	1.39	n.s.
Existentiality	41.0	8.9	44.3	8.4	1.89	n.s.
Feeling Reactivity	44.5	8.5	47.5	8.4	1.74	n.s.
Spontaneity	48.3	7.4	50.6	10.1	1.15	n.s.
Self-Regard	44.2	10.6	49.8	11.4	2.55	.02
Self-Acceptance	40.9	9.0	46.2	8.6	3.08	.005
Nature of Man Constructive	42.2	10.0	45.1	10.4	1.44	n.s.
Synergy	39.1	14.8	42.7	11.4	1.39	n.s.
Acceptance of Aggression	43.6	11.7	46.9	9.5	1.48	n.s.
Capacity for Intimate Contact	43.0	10.0	48.0	10.9	2.51	.02

global distress and confusion, coupled with a tendency towards increased interpersonal involvement. The decreased elevation of the *Pa* scale suggests a reduction in fear and increased trust in other persons. The change on the *Ma* scale may be interpreted as decreased agitation and increased calmness.

The pre- to post-changes manifested by the twenty-eight who completed the POI, both at referral and one week following the DPT-assisted therapy session, were similarly examined by *t*-tests. As presented in Table 3, movement towards increased self-actualization was indicated on each of the variables of the instrument. Statistically significant positive change was found on both of the primary POI scales, "Time-Competence" (*Tc*) and "Inner-Directedness" (*I*). The change on the *Tc*-scale would be interpreted to mean that, following therapy, patients were living more in the present moment, as opposed to dwelling on events that happened in the past or worrying about what might happen in the future. The movement on the *I*-scale suggests that participants were more

self-assertive and confident, being less dependent upon the opinions, moods, or support of other persons.

Three of the POI subscales also were found to indicate positive movement of statistical significance. The increase on the "Self-Regard" scale indicates an increase in feelings of self-worth. The "Self-Acceptance" scale reflects an increase in the ability to be accepting of self in spite of weaknesses. These two findings are especially striking in light of this particular sample of participants, namely, terminal cancer patients who can "do" progressively less to enhance their sense of self-esteem through physical accomplishments in the material world, and must learn increasingly to recognize the value of their intrinsic "being" if high self-worth and self-acceptance are to be achieved and maintained. The "Capacity for Intimate Contact" scale indicates increased interpersonal sensitivity in terms of experiencing warm and genuine relationships with other persons. Trends towards statistical significance may be noted on the following subscales: "Existentiality" ($p < .06$), which suggests decreased rigidity and increased flexibility in the application of values; "Feeling Reactivity" ($p < .09$), which indicates enhanced sensitivity to one's own needs and feelings; and "Acceptance of Aggression" ($p < .15$), which reflects decreased denial of anger.

Clinical Observations

The same range of altered states of consciousness was reported by participants during the period of DPT action that we had encountered previously in our research with LSD, including insightful personal experiences — sometimes entailing regression and encounter with either literal or symbolic psychodynamic material — and also phenomena of an archetypal and/or mystical nature. Indeed, there appeared to be no form of experience that was facilitated uniquely by either one of the drugs.

However, differences between LSD and DPT consistently were found in terms of duration of drug action, rapidity of onset, and abruptness of termination. In the dosage range employed in this study (75 - 127.5 mgs.), the period of drug effects ranged from two-and-one-half to four hours. It may be noted that, in the context of other studies with alcoholic and neurotic patients, we typically have found low dosage (15 - 45 mgs.) of DPT to engender a reaction lasting one-and-one-half hours and high dosage (135 - 165 mgs.) to effect a reaction of between five and six hours.

The LSD reaction typically begins approximately twenty minutes after oral ingestion, gradually increases in intensity until the third hour, remains at "peak intensity" from hours three to five, and then gradually decreases, usually ending in mild effects that taper out completely between eight and twelve hours after ingestion. The DPT reaction in contrast, was found to begin within two or three minutes following intramuscular administration and to reach "peak intensity" within ten to fifteen minutes. The intense effects typically lasted for most of

the period of drug action, abating and terminating completely during the final one-half hour of the reaction. Instead of the "wave-like" end of the LSD reaction, in which subjects drifted back and forth between mildly altered states of consciousness and usual, everyday reality, the DPT reaction reliably was reported to terminate with definite closure, almost abruptness, allowing the subject to report that, "the drug effects are over."

Immediately following DPT sessions, patients typically appeared to be alert and eager to participate in verbal interaction, in contrast to the behavior usually manifested by LSD subjects at a comparable point in time. Whereas a disinterest in food usually prevailed until approximately twelve hours after LSD administration, it was not uncommon for DPT subjects to comment on feelings of appetite and to request food immediately after the termination of drug effects. Furthermore, whereas cancer patients treated with LSD sometimes manifested mild anxiety and required interpersonal support and reassurance for several hours following the termination of major drug effects, sometimes even necessitating that someone remain with the patient until sleeping medication took effect at night, patients treated with DPT appeared to be comfortable if left alone after the DPT session, although they often valued opportunities to interact with family members or friends.

Even though many of the patients were severely debilitated physically, the procedure of the DPT-assisted therapy session appeared to be well tolerated by all subjects in this study. No indicators of physical detriment conceivably related to DPT administration were observed. Similarly, although a few participants did not manifest noteworthy psychological improvement, no patient appeared to have been harmed psychologically by the procedure. This indication of the relative safety of DPT, when employed within the context of a constructive psychotherapeutic relationship, parallels our findings in projects of DPT-assisted therapy with alcoholic and neurotic patients.

DISCUSSION

As indicated above, the promise of DPT as an alternative to the longer-acting LSD has been supported by this pilot study. The self-report measures (Mini-Mult and POI) generally indicate change of greater significance than the data derived from the independent ratings (ECRS). Although the clinical impressions of the therapists would suggest that marked improvement often occurred in terms of decreased isolation, denial, and fear of death, the independent raters did not confirm these impressions in terms of mean changes for the sample as a whole. It is possible that some patients may have remained guarded during interviews with the raters, and hesitated to reveal their feelings about family members and the approach of death. This situation may have been compounded by our instructions to raters not to inquire about the contents of the DPT session. This directive was given in an attempt to remove possible emotional bias

on the part of the raters; it may be, however, that some sharing of the contents of the experience would have rendered it easier for the patients to reveal their feelings within the twenty-minute period of the interview.

As was hoped, DPT also remained an uncontroversial substance, even when participants were informed that the action of the drug was similar to LSD. To our knowledge, DPT has not been found in drug abuse circles, a phenomenon that partially may be attributed to the fact that DPT is inactive orally and must be administered parenterally.

The rapidity of onset characteristic of DPT, however, could be considered a possible disadvantage of the drug. It renders a relationship of trust between therapist and patient of utmost importance, and may demand significant clinical skill on the part of the therapist if nonproductive reactions of panic or paranoia are to be avoided. Ten minutes after DPT administration (versus two-and-one-half hours after LSD administration), the patient typically is encountering potent psychological material and must choose either to allow confrontation — and the possibility of resolution — to occur, or to seek to escape from the emerging experiences. It appears to be the latter alternative that causes panic to mount and paranoia to develop.

It has been suggested that persons who experience a difficult response to the onset of DPT may be similar to those who attempt to resist the effects of LSD when personally-potent experiences develop as the third hour of the LSD-reaction approaches. Thus, in a sense, the "moment of truth" that reveals the quality of the therapeutic relationship, the patient's motivation for therapy, and/or the conflictual emotions that await resolution, could be seen as coming sooner with DPT than with LSD. In this framework, DPT could be viewed as an agent that immediately focuses the patient's attention on the therapeutic work that needs to be done, whereas LSD first may facilitate the experience of milder, aesthetic phenomena or encounter with psychodynamic material well concealed in symbolic imagery. Whereas such mild sequences usually are interesting to the patient, they appear to have minimal psychotherapeutic value unless they develop into experiential insights, often entailing emotional abreaction. Similarly, the mild imagery characteristic of the final hours of the LSD reaction appears to have minimal psychotherapeutic value. Thus, it may be suggested that DPT engenders access to essentially the same material that might be encountered by a given person during the most intense portion of a therapy session assisted by LSD.

In regard to the onset of DPT effects, it may be noted that the rapidity is not necessarily experienced as such by the patient. As one of the first drug effects usually is an alteration in perception of time, a sudden onset in terms of an observer watching a clock may be experienced by the patient as a very gradual — and even gentle — process. It appears probable that the anxiety reported by some people at the time of onset may be caused to a greater extent by the psychodynamic content being encountered than by the speed of onset of the drug's effects *per se*.

The pilot study reported in this article indicates the promise of a "therapeutic package" consisting of numerous variables, only one of which is the pharmacological and potentially-therapeutic action of DPT. The need to pursue a controlled study, ideally entailing random assignment to a group that receives therapy of comparable duration without drug administration, or with an active placebo, is apparent. Although our repeated attempts to obtain funding for such a project in the past have been unsuccessful, our interest in conducting such research — or in supporting its conduct elsewhere — continues.

Kübler-Ross and others have indicated that therapy interventions unassisted by psychoactive drugs, often of very brief duration, sometimes can be of impressive efficacy, especially with terminal patients [18–21]. Similarly, our experience has been that considerable psychotherapeutic progress often appears to occur during the period of therapy that precedes the day of drug administration. However, it is our clinical impression that the drug-assisted therapy session usually facilitates a dramatic advance in the therapeutic process. Even some of the insights that have been verbalized prior to the drug-assisted session appear to be experienced by the patient in a fullness that seems to engender a more complete degree of therapeutic resolution than previously was evident.

In addition, to the facilitation of what might be termed "conventional" psychodynamic processes, DPT and LSD sometimes elicit archetypal or mystical experiences that are reported to be of profound subjective significance to the patients who encounter them. Typically such experiences are described in terms of the death of the usual personality; a discovery of a nontemporal form of consciousness, often imbued with religious or philosophical significance; and a subsequent experience of rebirth into the world of everyday living. This type of experience, described in detail elsewhere [22], is characterized by a quality named "noetic" by William James [23], that often entails an unquestioned "knowledge" that life somehow makes sense in spite of the reality of death, and that human consciousness somehow is part of an indestructible, eternal order [23]. Whether we interpret such "knowledge" as ontological insights into the actual structure of reality or as merciful deceptions of a bedrugged brain, it remains clinically apparent that the persons who encounter such mystical experiences usually are those who subsequently are most free of anxieties about the process of dying and death itself and, simultaneously, appear to live the time that remains most fully. It is suggested, therefore, that the mystical experience may contribute a significant element to the therapeutic process, a suggestion essentially congruent with the psychiatric concept of "regression in the service of the ego." Optimal treatment with this mode of therapy thus might be seen to include both a thorough exploration of conventional psychodynamic issues and an experience of a mystical nature in which one's life may be perceived from a new perspective.

As in our research with LSD, some patients appeared to suffer less from

physical pain following DPT, whereas others reported no noteworthy difference. With some participants, it appeared as though the fear of pain as the herald of death was abated during the session with DPT, and thereafter it became easier to permit muscular relaxation. Also it appeared to be easier to focus attention on persons and issues of importance, thereby relegating pain more to the periphery of conscious awareness. In addition to reducing the psychological factors that may aggravate pain, it is possible that pharmacological factors alone may play a significant role in some persons. The attempts to gather data on the variable of pain were minimally successful in this particular study, being limited to the independent ratings on "Preoccupation with Pain." It should be noted that one of the physicians who has observed our work during the past decade is of the opinion that reported reductions in pain were more prevalent and more lasting in the work with LSD than has been apparent with DPT. Although we have found the measurement of pain in cancer patients to constitute a difficult research problem, a comparative study could be designed to explore this issue in a systematic manner.

It has been suggested that the LSD reaction could be terminated by the administration of chlorpromazine, as did Eric Kast in the third of his pioneering studies with LSD and cancer patients [24], thereby reducing the length of drug action. From a clinical perspective, however, this procedure would seem to have three disadvantages. First, it might interfere with the process of the drug session, the content of which often "unfolds" as a unified and meaningful drama, thus leaving the patient with a sense of incompleteness and perhaps with unresolved feelings if the process is interrupted. Second, especially if the LSD session was terminated during an episode of psychological struggle or distress, the administration of chlorpromazine could be interpreted as implying that the therapist viewed the patient as too weak to work through the conflictual material to a point at which resolution could occur. Not only might such an "escape" further undermine the patient's self confidence — even if it was welcomed at the moment of chlorpromazine administration; it also could leave the patient with a feeling that something of importance had been avoided that still awaits confrontation and resolution. Third, the effect of chlorpromazine itself might suppress the feelings of well-being that may occur at the completion of a drug session, and thereby inhibit the spontaneity of the patient in interaction with the therapist and family members.

Other similar psychoactive drugs still await clinical trials as adjuncts to therapy with cancer patients. It is conceivable, for example, that psilocybin or psilocin might be found to possess the apparent advantages of DPT, while providing a somewhat more gradual onset. Similarly, it has been suggested that MMDA [25] and also Ketamine hydrochloride might merit further exploration as useful short-acting adjuncts to psychotherapy [26].

In conclusion, it may be stressed that DPT, like LSD, would appear to have little usefulness as a purely chemotherapeutic agent. As a potent tool within a

constructive therapeutic relationship, however, its value may be found to be quite substantial. Throughout the past decade of our research with psychedelic substances, it has become increasingly apparent that these drugs provide not an "experience," but rather an opportunity for the resolution of conflicts and further self-actualization. Whether one retreats from the opportunity engendered by the drug action, thereby entering into anti-therapeutic sequences of panic; or whether one attempts to control the experience by volition, thereby ensuring that little change of any kind will occur; or whether one responds fully to the opportunity, thereby permitting confrontation, resolution and insight, clearly depends on extra-pharmacological variables [27]. Paramount among such variables appear to be the quality of trust inherent in the therapeutic relationship and the personality structure and current conflicts of the patient.

It also may be noted that, in addition to the benefit this form of drug-assisted psychotherapy often has for the cancer patient, indirectly it has appeared to facilitate decreased stress in members of the patient's family. Not uncommonly, it has been the patient himself who has become the primary counselor for family members. The shared anticipatory grief appears not only to make possible open communication between the patient and family members, and "death with dignity," but also may be seen as potentially significant preventive medicine for the family members. They, like all of us, must attempt to resolve the feelings engendered by the death of an important person in their lives, and continue to come to terms with their own mortality.

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ACKNOWLEDGEMENTS

Significant contributions to this research have been made by Nancy Jewell, Albert A. Kurland, M.D., Ann Lansinger, Karen Leihy, R.N., Ilse Richards, R.N., T. Glyne Williams, M.D., and Richard Yensen, Ph.D.

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