

Emotional dehiscence after successful renal transplantation

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The *Nephrology Forum* is designed to relate the principles of basic science to clinical problems in nephrology.

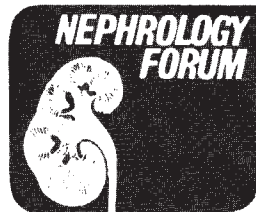
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Case presentation

This 26-year-old woman was in good health until 6 years ago when she developed membranoproliferative glomerulonephritis. After 3 years of progressive, functional renal deterioration, the patient began chronic hemodialysis. After 14 months of hemodialysis, accompanied by depression and poorly controlled hypertension, the patient was encouraged to accept a 4/4 HLA-identical graft from her 21-year-old brother. Two weeks following transplantation, she had a severe rejection episode, which was treated with 7 grams of methylprednisolone; hemodialysis was required for 2 weeks but her renal function improved subsequently. Two months after transplantation, the serum creatinine concentration was 1.2 mg/dl. Renal function has remained stable for the last 18 months; the most recent value for serum creatinine was 0.9 mg/dl. Her therapeutic regimen included: prednisone, 30 mg every other day; azathioprine, 100 mg/day; and antihypertensive medications. Despite the restoration of normal renal function, the patient's psychiatric stance did not improve following transplantation.

The patient was a nurse's aide in a nursing home prior to the onset of her renal disease. She is the oldest of three children; her two brothers are 18 and 21 years old. The patient's parents separated when she was 7 years old. After the separation, she lived with her mother with whom she had a hostile and dependent relationship. The mother remarried but was divorced 6 years ago. The patient's family life was chaotic and unstable and included

many episodes of alcohol-associated physical abuse by her father. During the patient's 14 months of dialysis, she experienced severe depression, which was manifest as withdrawal, difficulty sleeping at night, and an inability to communicate with the nursing and medical staff. She would frequently sleep during the entire dialysis session, thereby avoiding all contact. The patient had some suicidal thoughts while undergoing dialysis but denied ever attempting suicide. Her depression was treated with amitriptyline, and her energy level and personal care improved. Following "successful" transplantation, the patient again became depressed and addicted to narcotics, requiring up to 12 tablets of Percodan® or Percocet® per day. During a five and one-half month period after transplantation, she took a minimum of 1345 Percodan® tablets.

The patient was admitted to the psychiatric unit approximately 8 months following transplantation for evaluation of depression and drug abuse. Narcotic withdrawal was not successful and she was discharged receiving methadone instead of Percodan®. She stated then that she had been depressed "since the transplant." It became apparent that the patient had suffered several losses over the preceding years: *first*, she had become very attached to the dialysis unit and lost that relationship after successful transplantation; *second*, the dialysis social worker with whom she had worked quite closely left; *third*, she had a severe rejection episode following kidney transplantation and was afraid of losing the kidney; *fourth*, she was engaged to an older, divorced man prior to the onset of her renal failure, and the restoration of normal renal function allowed her to consider marriage, thus threatening her with separation from her mother. Finally, the patient was quite disappointed that the anticipated dramatic change in her life did not occur after successful treatment of her kidney failure.

In summary, the patient is a young woman with chronic renal failure who, following HLA-identical kidney transplantation, achieved restoration of normal renal function but has not achieved an independent mode of living. Severe depression, antedating her kidney transplant has persisted, and drug dependency has become a major problem.

Discussion

DR. SAMUEL H. BASCH (*Associate Clinical Professor of Psychiatry, Mount Sinai School of Medicine, and Consultant Robert Wood Johnson, Jr. Renal Treatment Center, Mt. Sinai Hospital, New York, New York*): It is appropriate at this time in the growth and progress in the field of nephrology that we accord proper attention to the psychologic state and general welfare of the renal patient. As the kidney patient's life expectancy is artificially extended by medical technology, sophisticated surgery, and space-age pharmacology, quality-of-life issues become more prominent. Physicians are

Presentation of the Forum is made possible by grants from Hoechst-Roussel Pharmaceuticals Inc., Smith Kline & French Laboratories, G. D. Searle & Co., Warner-Lambert Pharmaceutical Division, Burroughs Wellcome Company, Geigy Pharmaceuticals Inc., Ciba Pharmaceuticals Inc., and Boehringer Ingelheim Ltd.

0085-2538/80/0017-0388 \$01.80

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involved in more complex and sometimes unsettling ways, which are demonstrated by the types of problems that emerged in caring for this patient and by the treatment choices that confronted the medical staff. This patient also raises several issues relevant to modern forms of renal care and their psychological impact on the patient.

Increasingly, medical attention has been drawn to the profound psychological effects of end-stage renal disease and its treatments on the total functioning of the patient [1]. In *Hamlet*, Shakespeare captured the essence of this predicament when King Claudius stated.

. . . . Diseases desperate grown
By desperate appliance are relieved,
Or not at all. (IV, iii, 9-11)

Our patient certainly was so struck by both the disease and its treatment.

Renal disease early in life

The patient presented was first stricken with membranoproliferative glomerulonephritis when she was 20, barely out of her teens. Her age is relevant, because renal disease cannot only stunt physical development but also can cause retardation or regression of emotional growth [2]. Our patient, perhaps immature despite her age, most likely experienced a suspension of her personality development with the onset of her renal disease.

Renal disease frequently occurs early in life and, when it does, it often has subsequent life-long psychological and physical consequences. Stunted growth, anomalies accompanying certain renal disorders, and physical changes from kidney disease exaggerate the patient's sense of being different, if not odd, and lead to isolation. The young person might feel like an invalid or misfit and tend to withdraw voluntarily. Medical visits, episodes of illness, and hospitalizations interfere with the patient's schedule and activities. Lack of social activities and exposure deprive the young individual of the interaction and experience necessary for emotional growth and development. When the treatment itself becomes central, as in hemodialysis or transplantation, it can replace other dimensions of life and virtually become life itself. Kidney disease imposed itself on this patient; the disorder and its therapy absorbed the patient's resources, time, and energy while the rest of her life stood still. Her world became a renal world at age 20.

Personality and diagnosis

Our patient's history describes her in various contexts as hostile and dependent, depressed and

withdrawn, noncommunicative, and having a chaotic and unstable background. A battery of psychological examinations, although not reported, was indicated and would have provided an additional basis for information and understanding. These examinations can uncover hidden psychopathologic entities not readily apparent clinically. These tests can sometimes reveal conditions such as depression or anxiety. Also, the tests can diagnose the organic mental syndrome and a range of psychoses and neuroses [3].

The psychiatric differential diagnosis is important here. This patient's history does not indicate schizoid, borderline, or schizophrenic diagnoses, all of which would have to be investigated in a patient with this history and clinical course. Psychological evaluation prior to therapy is essential because the psychological outcome of the treatment can be understood only in terms of the individual's psychopathologic conditions. Just as the patient's preoperative physical status influences the outcome of surgery, so does the psychological matrix affect the psychiatric outcome and life adjustment of the patient. The depressed or schizoid individual stricken with renal disease cannot readily emerge from dialysis or transplantation with good mental health.

The history described unfolds the story of a young woman who has had psychological disturbances since childhood. However, the case material is not sufficient to provide evidence of a severe, specific underlying psychiatric disorder. The consideration of whether any deep psychopathology does exist, however, leads to an examination of an area of recent inquiry that also links psychiatry and nephrology.

Schizophrenia and dialysis

In 1960, Feer et al. reported improvement in three of five patients with schizophrenia treated with dialysis [4]. The observation lay dormant until recently when psychiatrist Wagemaker and nephrologist Cade described dialysis as an effective treatment in a small number of patients with schizophrenia [5]. Palmour, a biochemist at Berkeley, studied Wagemaker's patients and reported a hundredfold higher concentration of β -Leu⁵-endorphin in fluid of the first dialysate than in the fluid of the 16th dialysate [5]. This finding suggested that the metabolic stores of the aberrant peptide gradually were being diminished by the treatment. Yet this peptide, found to be very active when injected into animals, has not been shown to react similarly in humans. Information that could offer a different explanation as to how hemodialysis could relieve

schizophrenia was offered by twin articles in a recent issue of *Lancet*, which reported a virus-like agent in the cerebrospinal fluid of more than one-third of several dozen schizophrenic patients studied [6, 7].

The notion that an agent causative for schizophrenia is removed by hemodialysis remains moot. Patients with normal kidney function have been studied, and dialysis obviously adds only slightly to the glomerular filtration capacity in these patients; the unknown agent therefore would have to be filtered in the glomerulus and resorbed by the tubule. Since the artificial kidney does not resorb, this could explain eliminating the agent during dialysis [8]. The clearance of middle-molecule polypeptides is lower for the dialysis machine than for the kidney itself [9]. β -Leu⁵-endorphin, a middle-molecule polypeptide, thus would be better removed by the normal kidney than by a dialyzing machine. Furthermore, protein and protein-bound agents are not removed by normal kidney function or through dialysis. The alleged schizophrenia-inducing agent therefore would have to be a small, non-protein-bound molecule that in a normal kidney is resorbed completely by the tubule [8]. However, research on this topic to date has not provided convincing data [8]. No reports of controlled and double-blind sham dialysis studies utilizing ranges of surface area and membrane permeability have been published.

Hemodialysis versus transplantation

Let us now return to our patient. Despite the lack of evidence supporting the thesis that dialysis can cure—or at best control—psychologic problems, the case report suggests that the psychiatric symptoms of this patient might have been less prominent during hemodialysis than after transplantation. This possibility raises the issue of treatment choice, namely, whether hemodialysis, although not curative, might be psychologically more salutary than is renal transplantation in certain individuals. With the advantage of retrospection, we recognize that this young woman made an adjustment, albeit marginal, on hemodialysis.

The decision for renal transplantation is based on a multitude of factors, including the bias of the renal unit toward dialysis or transplantation; the emphasis, experience, and expertise of the medical and surgical staff in dialysis and transplantation; the general medical condition of the patient; and the staff's quest for improvement of the patient's physical state. When the decision to transplant has been made, the staff often has a unified approach in pre-

senting the recommendation to the patient. Most patients, because they trust the dialysis staff and are not equipped with the in-depth knowledge that the medical personnel hold, accept the recommended treatment. These patients even might concur with the recommendation because they feel vulnerable, dependent, are afraid to refuse, or wish to please the staff. If the patient accepts the recommended transplant, as did the patient presented today, and if the medical or psychologic outcome is questionable, a pall might be cast on the original decision, with the medical staff experiencing uncomfortable feelings of doubt, regret, or guilt. Accordingly, uncertainties regarding treatment choice produce anxieties among the staff and can affect future medical decisions. Although these factors might or might not have been germane to the care of this patient, we should take them into account.

Depression, loss, and self-destructive behavior

Almost every individual sustains a reactive depression when faced with a profound illness like renal failure and its treatment. This depression is manifest by a lowering of spirits and a reduction in self-esteem. Diagnosing depression in the renal patient is difficult: the usual physiologic concomitants of depression such as changes in eating, sleeping, and bowel habits are difficult to evaluate in light of the patient's complex metabolic situation [10]. Insomnia, as in our patient, can lead to depression but also can be a manifestation of depression. The reversal of diurnal patterns and other sleep disorders occur regularly in dialysis patients.

Other psychologic symptoms of depression also defy measurement because of the presence of renal failure and its attendant psychosocial problems. For example, exaggerated dependency needs that accompany depression could be confused with the actual increased dependency of the renal patient. Guilt that accompanies depression could be mistaken for other guilt, e.g., guilt over taking an organ from a recipient [11] or guilt over making new demands on the family. Depressive feelings of weakness or malaise cannot be evaluated, nor can decreased mobility, narrowed interests, or reduced attention span, all of which can be nondepressive accompaniments of the illness or treatment. The suicidal thoughts our patient had are not uncommon. That does not mean these thoughts should be dismissed or ignored but that they should be considered in the context of the total situation.

Depression often occurs secondary to a loss—the loss of a relationship, a material loss, or even a sym-

bolic loss such as loss of pride or self-esteem. The renal patient experiences losses ranging from nephrectomy and the loss of body integrity and function, to economic and occupational losses, food and sexual deprivation, disruption of recreational activities, hospitalization with separation from family and friends, and the unpredictability of health. Ultimately, the patient realistically fears loss of life.

At times, depression can be manifest by symptoms of self-destructive behavior such as neglecting the dialysis access site, flaunting the diet, or drug abuse. In a recently published *Nephrology Forum*, the patient was admitted to the hospital after omitting her medication because of "emotional stress and depression" [12].

Finally, increased suicide rates among hemodialysis patients result from the high incidence of depression in this group. Abram and his associates collected information from 3478 patients at 201 hemodialysis centers across the United States [13]. The incidence of suicide was more than 100 times the rate in the general population; about 5% of dialysis patients ended their lives by suicide.

Medications

I think it would be useful to review some of the general neuropsychiatric problems concerning the use of drugs in renal patients before discussing this patient's specific drug problem. In these patients, the number of drugs that can cause psychologic or neuropsychiatric disturbances are legion. Antihypertensive drugs often are implicated in mood or other disturbances. Drugs that can cause psychologic disorders are used routinely in renal patients, who might be psychiatrically unstable because of existing electrolyte and water imbalances, metabolic derangements derived from the renal disease, concomitant medical disorders, or the primary treatment itself. Our patient today was noted to be depressed during therapy with antihypertensive medication, although the specific drugs were not named. She was later reported to be depressed when given steroid therapy following transplantation. The degree to which the drugs were implicated in causing her depression was not mentioned. Amitriptyline administered while the patient was undergoing dialysis led to improvement of her depression.

The importance of selecting appropriate pharmacologic agents leads me to a brief discussion of the use of psychotropic medication in the patient with renal failure [14, 15, 16, 17]. The *phenothiazines* are metabolized by the liver, and only small quantities of unchanged drug are excreted in the urine. Gener-

ally, only slight dosage modification is required; however, certain metabolic processes slow down in uremia, and drugs dependent on enzymatic degradation by the liver can reach toxic levels with normal dosage. Phenothiazines should not be prescribed prior to dialysis because of the risk of hypotension. The anticholinergic effects of these compounds should be taken into account in patients already having difficulty with urination, such as those suffering from prostatic hypertrophy or neurogenic bladder.

Diazepam, largely protein-bound, depends on liver metabolism for degradation to active and inactive metabolites, which then are excreted in the kidney. Metabolites can accumulate in patients with renal insufficiency, so diazepam should be used with care. Parenteral administration of diazepam in a patient on hemodialysis can cause hypotension or respiratory distress.

Lithium is freely filtered across the glomerular membrane and is reabsorbed with water and sodium in the proximal tubule. It is also freely dialyzed. In the manic-depressive patient, the drug should be administered after dialysis; the dosage and serum lithium levels should be closely monitored both before and after dialysis.

Long-acting *barbiturates* should be avoided in patients with renal failure because these agents depend on renal function for excretion. Shorter-acting barbiturates are metabolized in the liver, and only small amounts of their active and inactive metabolites are excreted in the urine. Phenobarbital, a weak organic acid, exists in both ionized and unionized form depending on the pH of the tubule fluid. Raising the urinary pH transforms the drug into its nondiffusible (and nonreabsorbable) ionic form and increases its excretion in the urine.

The *tricyclic antidepressants* are metabolized almost entirely in the liver, and only small quantities of unchanged drug are found in the urine. A major dosage modification in renal patients, therefore, is not required. The drugs' cardiotoxic and anticholinergic effects must be kept in mind, however. Hypotension from these agents can aggravate cardiac and renal function. Because the antihypertensive effect of guanethidine can be blocked by antidepressant medication, initial doses should be small and gradually increased. In our patient today, the use of amitriptyline was, at least temporarily, an effective treatment for depression.

Addiction

Given the high frequency and severity of depression and physical suffering, as well as the neuropsy-

chiatric problems due to drugs, the potential for drug abuse is ever present in renal patients. We have no explanation of how our patient became addicted to narcotics. The word *abuse* was used, which suggests that there might not have been inordinate pain or other compelling medical indications for the narcotics used. Further, no information is available regarding the patient's psychiatric hospitalization or how her addiction was evaluated and managed. I presume that the patient complained of pain postoperatively, and that those complaints led to the original dispensing of Percodan® and Percocet®, and subsequently to the perpetuation of her habit. It obviously would be difficult to ignore the pleas and demands of this forlorn young woman who suffered a long series of losses and disappointments. Her passive suffering manner would include an inviting although unspoken demand for you to "do something" for her, to relieve her, to perhaps make up for her deprivations and deficiencies, and to do for her what the transplantation did not: make her feel better. Would narcotics relieve her? Early in her life this woman experienced physical abuse from her alcoholic father; later, she took physical abuse from her medical disorder and treatments. She appears similar to the passive, marginally functioning, orally dependent individual we often consider predisposed to the development of a drug addiction.

Our patient was admitted to the psychiatric unit because of drug abuse but was not withdrawn from narcotics. There is no clear explanation of why drug withdrawal did not take place. It certainly was not from lack of attention to the carefully counted 1345 Percodan® tablets dispensed over five and one-half months. Our patient was likely the victim of institutional and situational circumstance. If no medical indication for narcotics existed, the patient could have benefited from readmission to the Psychiatry Service, with a joint treatment plan, a specific drug-withdrawal schedule, and ongoing liaison between the nephrologists and the psychiatrists.

Withdrawal from narcotics, however, might not have been accomplished with impunity: the addiction might have been used by the patient as an attempt to medicate herself for depression. After drug withdrawal, her depression would still require treatment. If possible, I would have reduced to a minimum her prednisone or other medications that might have contributed to her psychiatric symptoms. Psychotherapy should be instituted to deal directly with the deprivations described in the history and with the indignities of her disorder and treatment. The losses of the social worker and the

dialysis unit staff, which duplicate the losses of her childhood, also should be explored.

Family relationships

This patient's family history is striking in that it describes a hostile and dependent relationship with the mother, the mother's two marriages and divorces (one divorce coincident with the onset of the nephritis), and a chaotic and unstable home life; yet there is no mention of the mother's involvement after the patient became ill. The mother maintained a low profile in the history, if not in the actual life, of the patient. The mother's involvement certainly would profoundly affect the patient. If her mother had been busy with her own life, maintaining narcissistic investments and ensuring her own survival, and either subtly or overtly ignoring our patient, perhaps rejecting, diminishing, or even undermining our patient, that would explain a missing piece of the puzzle. We then could understand the patient adopting an abandoned and self-destructive, if not martyred, position when feeling helplessly thrown to the devices of her disease, treatment, and caretakers. Neither narcotics nor individual members of the dialysis unit staff could make up for this important maternal deficiency.

The patient's general relationship with her younger brother, the kidney donor, also requires attention. Guilt over taking her brother's kidney and other psychic complications related to the donor-recipient relationship have to be explored. As we have seen in other organ recipients, patients can believe that their gains are at the expense of the donor. Any organ recipient can feel that the donor incurs a loss or suffers, and that the recipient lives at the donor's cost. Both kidney donor and recipient usually are aware of the donor's sacrifice—the small but real risk of developing renal insufficiency with a single kidney—and the recipient is well aware of what it means to suffer from renal disease.

The issue of indebtedness is important in transplantation psychology. Ralph Waldo Emerson said: "In nature, nothing can be given, all things are sold." This aptly describes the transplantation transaction and could apply to our patient, who thought that a dramatic psychologic as well as physiologic change would occur following transplantation. This notion, which sometimes exists in an even more elaborate form and occurs commonly in transplantation patients [11], should be explored and resolved. Other patients have developed severe intrapsychic conflicts concerning a kidney donated from someone of a different age group or the oppo-

site sex. Some patients believe that the new organ will transform them sexually or in some other fashion. The post-transplantation reality dispels fantasy and sometimes leads to severe disappointment or dejection. For the patient presented, psychotherapy in combination with antidepressant medication was indicated and might have proved successful. Amitriptyline could have been prescribed again or replaced with an equivalent antidepressant agent.

Our patient's history contained a reference to her engagement, but we have no definitive statement regarding the outcome of the relationship. Although she may have preferred her dependence on her mother to marriage, other reasons can explain why relationships of end-stage renal patients become strained or fail. One of these reasons is sexual dysfunction.

Sexual disorders in the uremic patient

Over one-half of uremic men and over one-third of uremic women experience severe sexual disorders. Women undergoing hemodialysis report a marked decrease in frequency of intercourse and orgasm. In one study of 429 hemodialysis patients, approximately 60% of the men considered themselves partially or totally impotent [18].

Faltering sexual performance that results from uremia is not helped by dialysis. Even though uremic patients can exhibit improvement in other somatic functions, their sexual functioning can deteriorate while they are being dialyzed. Kaplan de Nour reported that male patients' sexual functioning deteriorated only after they were established on maintenance dialysis programs for an extended period [19].

A psychogenic cause of sexual dysfunction cannot be established until physical causes are ruled out. Renal dialysis patients are uremic and anemic, and most have hyperparathyroidism. Their access sites exaggerate circulatory and bleeding problems. Various hormonal abnormalities have been reported [20, 21]. Women have menstrual changes; men have lowered sperm counts and reduced testicle size. Some men have reduced testosterone with normal luteinizing hormone levels; others have normal testosterone accompanied by elevated luteinizing hormone levels. At this time, it is unclear where along the hypothalamo-pituitary-gonadal axis the problems exist.

Antonioni et al reported a study of a group of eight impotent male hemodialysis patients, four treated with zinc chloride added to their dialysis bath, and four maintained as controls [22]. Three patients re-

ceiving zinc reported a striking improvement in potency after 2 weeks. The fourth treated patient reported some improvement after 4 weeks, but no patient recovered his predialysis level of sexual function. There was no change in sexual function in the control patients. Massry et al treated seven impotent male hemodialysis patients with 1,25-dihydroxycholecalciferol to suppress parathyroid activity. [23]. Four patients reported total recovery of sexual function, and one reported increased frequency of intercourse. However, to date no impressive statistical studies have been reported.

Aids to the differential diagnosis of psychogenic versus organic impotence include plethysmographic studies of vaginal blood flow and temperature change in women and of nocturnal penile tumescence in men during the rapid eye movement (REM) phase of sleep [24]. How sexual function might have affected our patient and her relationship with her fiancé or with others is not stipulated in the history, but this information could shed light on her depression and psychologic state.

If our transplant patient could have been withdrawn from narcotics and treated for depression, we then would have had a passive, orally dependent patient with a kidney transplant who was receiving prednisone and other drugs, a woman forlorn and distraught by her pre-existing personality and life history. Freud proposed that the best we can do is transform neurotic misery into common unhappiness [25]. Perhaps that is the most that is possible with this patient.

In conclusion, this patient demonstrates the profound nexus between renal treatment and the psychology of the patient. She draws attention to the ways treatment can affect depression, family relations, and sexual function, and points up the risks of drug abuse and addiction. Finally, she illustrates the psychiatric implications of the always difficult choice between hemodialysis and transplantation.

Questions and Answers

DR. J. T. HARRINGTON: We might gain a clearer understanding of the patient presented today through a detailed discussion of certain events. However, a case summary of 3, 10, or even 50 pages could not adequately trace the complex and difficult course of this patient over the last 2 to 3 years. Perhaps Dr. Bushinsky, who joined me in the management of this patient, might wish to comment on her addiction to narcotics, which developed following kidney transplantation.

DR. DAVID BUSHINSKY (*Renal Fellow, NEMCH*): When the patient was discharged from the hospital, no narcotic drugs were included in her medications. She did quite well until we began to decrease her clinic visits. The patient then developed calf pain and vague knee pain, which she said prevented her from returning to work. Her symptoms were not typical of phlebitis and we did not want to hospitalize her for a full investigation. Nonetheless, the pain was chronic and we prescribed pain medication. It soon became obvious that the patient was abusing the medication; on three well-documented occasions she obtained additional medication by claiming that she had lost the prescription, when actually she had filled it at another pharmacy.

We made many attempts to persuade the patient to avail herself of the drug-withdrawal program at this hospital, but she always found a reason compelling her to delay entering it for 3 or 4 weeks. We therefore chose to give her the pain medication she needed rather than risk her discontinuing prednisone and azathioprine, thereby endangering her kidney transplant. We documented every pain tablet she took because we wanted to know the extent of her addiction.

DR. HARRINGTON: The patient was withdrawn from Percodan® and given methadone, but she has never been able to discontinue the methadone. She still travels approximately 150 miles daily to an outpatient methadone clinic. We were very concerned that if we broke our relationship with her by not giving her pain medication, she might have stopped taking the medications necessary to maintain the transplanted kidney. That actually occurred several years ago when a patient of mine discontinued taking all medications and allowed a well-functioning kidney to be rejected so that she could return to the protective environment of the hemodialysis unit.

DR. S. BASCH: Apparently, this patient is a manipulative person. One can sense considerable discomfort among the medical staff because she influenced the therapeutic decisions. The term "tyranny by the mentally ill" describes this uncomfortable situation, which is comparable to a child who threatens a temper tantrum if refused something by the parents. A possible approach to this patient's problem would be to hospitalize her for drug withdrawal and concentrated psychotherapy while over an extended period of time attempting to define with her the source and extent of her need for narcotics. Like your other patient, she might find the environment of the dialysis unit preferable to working and

functioning in the outside world; this is a typical response in patients with passive/dependent personalities. In any event, a very large commitment on the part of the Psychiatry Service would be required.

DR. JOYCE ROOT (*Liaison Psychiatrist to the Renal Service*): I should like to comment on the patient's admission to the psychiatric inpatient unit for treatment of depression and narcotic withdrawal. Before she was admitted, I had arranged with the residents that she be detoxified. Unfortunately, her admission coincided with the July change of house staff and she was able to convince the new house staff to continue giving her medication. She then had no further interest in investigating her depression and she ultimately left the inpatient unit extremely angry and still drug dependent. Ideally, she should have been admitted to a psychiatric unit equipped to provide extended inpatient milieu and individual psychotherapy focused on her underlying depression.

DR. J. J. COHEN: Several general issues are raised by our experience with this patient. You mentioned the difficulty of assessing depression during the course of dialysis because depressive symptoms so easily can be ascribed to other medical concerns. Are there valid psychologic tests that can be used for discriminating between "endogenous" depression and the depression that might stem simply from the dialysis experience itself?

DR. BASCH: Yes, psychologic tests can be helpful in obtaining a more objective evaluation of the patient's mental status. An additional important factor in assessing the depression is its degree. Complete withdrawal from family and friends certainly is more significant than are low spirits. If the patient manifests symptoms of psychotic depression such as delusions, the problem is more likely pathologic than reactive. Many patients experience reactive depression during the first 6 months of dialysis therapy. It is so common that medical teams take it for granted. If the depression continues beyond the 6-month period, however, or if it lasts longer than 2 months, more attention should be paid to that aspect of the patient's well being.

DR. COHEN: Are different therapeutic strategies indicated for pathologic depression as compared to reactive depression?

DR. BASCH: Yes. Because the patient is an individual, the therapeutic approach varies. Psychotherapy should be employed whenever feasible. Some patients, however, can be treated more effectively with antidepressive agents. We have treated manic-depressive patients with lithium, al-

though this has been difficult. We have even used electroconvulsive therapy (ECT) on occasion, especially in patients whose cardiac function is compromised and in whom the cardiotoxic tricyclic drugs are contraindicated. Electroconvulsive therapy might be necessary in suicidal patients or in patients whose clinical conditions are life threatening because they have stopped eating or taking care of themselves. Immediate intervention is necessary in this situation, and the tricyclic agents may not achieve effective levels for at least 2 weeks.

DR. JAMES STROM (*Renal Fellow, NEMCH*): Are tricyclic drugs ever indicated in dialysis patients who have a simple mood disorder?

DR. BASCH: Again, I think that patients should be evaluated individually. Some people remarkably adapt to dialysis with no depression at all. Some patients are able to use denial and other kinds of defenses to make the adjustment. When treatment is necessary, I hold that psychotherapy is preferable to the use of drugs. When psychotherapy fails, I think tricyclic agents can be used selectively, but not indiscriminately in the renal patient undergoing dialysis.

DR. HARRINGTON: I would like to return to one of the questions that arose earlier: the use of psychologic tests. One of the problems we encounter in patients like this is predicting the effectiveness of nursing, medical, and psychiatric care. What specific kinds of preoperative psychologic evaluation and screening should be performed to avoid the problems we had in this patient?

DR. BASCH: That is a very difficult question. Even with psychologic screening we might end up transplanting some problem patients. Further, you would not want to have excessively strict criteria. There are certain people who are going to be self-destructive. They either might be suicidal or self-destructive in other ways. A great deal of information can be gained from clinical observation. You may know from the clinical history without doing psychologic testing that these patients will undermine their own treatment and that their transplants will not last. Their behavior on dialysis is a partial model for their sense of responsibility in taking care of themselves. One also can undertake formal psychologic examination, although we do not do this routinely. We have found that a striking number of patients have previously undetected low-grade organic brain disease [26]. I believe that it is more practical simply to rely on interviewing and close observation of the patient during the dialysis experience.

DR. COHEN: In treating patients with end-stage renal disease, one cannot help but be struck by how frequently serious psychiatric disease crops up. It almost seems that nature selects out psychologically weaker individuals to afflict with kidney disease. Obviously, this is not true. I think we would all agree that the stresses of this disease and its treatment allow for the expression of certain psychologic weaknesses that would have remained dormant under ordinary circumstances. That being the case, psychiatric disease should be no more common in this group of patients than in other equally stressed groups. Are any data available to substantiate this view?

DR. BASCH: I have never seen such data. However, I will share my thoughts about it with you. Physicians treating individuals with end-stage renal disease get a lot closer to their patients and discover psychologic facts that would not become apparent in the ordinary intercourse of life. Further, special factors operate here that bring out and exaggerate conflicts and problems. The first is that a chronic severe illness is invariably regressive. Regression does bring out neurosis, the essence of which is derived from childhood. Second, these people who are uremic have altered mental states and tenuous mental faculties. There is a strong interplay, if not synergism, between their neurologic and psychologic cerebral function. Thus tendencies toward psychiatric illnesses might become manifest in an exaggerated way because of this interplay.

DR. ROOT: I wonder whether you might comment about the problem of body image in this population of patients and how it relates to having an illness that can be cured by taking a body part from someone else.

DR. BASCH: The treatment of end-stage renal disease is a circumstance in which the body is intruded on in very special ways [1, 11, 26, 27]. The idea of extracorporeal circulation is remarkable; some patients describe it as "watching their body go by" as the blood circulates to and from the machine. Distortions of the body image stem from being subjected to a myriad of procedures, including access-site procedures, peritoneal dialysis, and nephrectomy. Freud said the ego is essentially a body ego. Our bodies dictate our sense of ourselves. How people experience life physically is very important in terms of the way they think about themselves. Renal patients have suffered so much mentally and physically that they perceive themselves as damaged, distorted, and at times worthless. This is reflected in a dream that was reported to me by a patient who

did not associate or interpret it. The patient is a black man in his forties who had worked as a packer in the garment industry. He reported "I had this dream and I couldn't tell where it took place. It was either in the dialysis unit or in the factory where I used to work in the garment industry. There were stacks of things around and I wasn't sure if it was dialysis equipment or fabric. There were people lined up and I wasn't sure if they were there to work in the fabric place or they were waiting for dialysis. There were people at the other end of the line in white coats but I couldn't tell what they were. They might have been doctors or nurses but they might have been the packers. I was in line with these people. Finally I decided that it was a dialysis unit and since I was a dialysis patient I felt relieved. But when we got up to the front of the line they packed the people inside of the boxes and tied the outside with dialysis tubing." He awakened at this point. Although there were no associations to the dream, it speaks for itself about the patient's sense of his body and himself, a notion shared by other dialysis patients, and perhaps by the patient presented today.

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References

1. BASCH SH: Adaptation to dialysis and body image. *Proc 5th Int Cong Nephrol Mexico 1972* 3:211-215, 1974
2. BASCH SH: Psychological aspects of kidney transplant and dialysis procedures in the adolescent, in *Handbook of Adolescent Psychiatry: A Psychodynamic Approach for Hospital Management*, edited by HEACOCK D, New York, Marcel Dekker, in press
3. BROWN F: Clinical psychology, in *Comprehensive Textbook of Psychiatry*, edited by FREEDMAN AM, KAPLAN HI, Baltimore, The Williams and Wilkins Company, 1967, pp. 1618-1621
4. FEER H, THÖELEN H, MASSINI MA, STAUB H: Hemodialysis in schizophrenia. *Compr Psychiatry* 1:338-344, 1960
5. WAGEMAKER H JR, CADE R: The use of hemodialysis in chronic schizophrenia. *Am J Psychiatry* 134:684-685, 1977
6. TYRRELL DAJ, PARRY TJ, CROW TJ, JOHNSTONE E, FERRIER IN: Possible virus in schizophrenia and some neurological disorders. *Lancet* 1:839-841, 1979
7. CROW TJ, FERRIER IN, JOHNSTONE E, MACMILLAN JF, OWENS DGC, PARRY RP, TYRRELL DAJ: Characteristics of patients with schizophrenia or neurological disorder and virus-like agent in cerebrospinal fluid. *Lancet* 1:842-844, 1979
8. PORT FK, KROLL PD, SWARTZ RD: The effect of hemodialysis on schizophrenia: A survey of patients with renal failure. *Am J Psychiatry* 135:743-744, 1978
9. ASABA H, BERGSTRÖM J, FÜRST P, GORDON A, GROTH CG, OULES R, ZIMMERMAN L: The effect of renal transplantation on middle molecules in plasma and urine. *Clin Nephrol* 8:329-334, 1977
10. BASCH SH: Damaged self-esteem and depression in organ transplantation. *Transplant Proc* 5:1125-1127, 1973
11. BASCH SH: The intrapsychic integration of a new organ: A clinical study of kidney transplantation. *Psychoanal Q* 42:364-384, 1973
12. THIER SO: Nephrology Forum: Renal insufficiency and hypercalcemia. *Kidney Int* 14:194-200, 1978
13. ABRAM HS, MOORE GL, WESTERVELT FB JR: Suicidal behavior in chronic dialysis patients. *Am J Psychiatry* 127:1199-1204, 1971
14. BENNETT W, SINGER I, COGGINS CH: A guide to drug therapy in renal failure. *JAMA* 230:1544-1553, 1974
15. KNEPSHIELD JH, et al: Dialysis of poisons and drugs—Annual review. *Trans Am Soc Artif Intern Organs* 19:590-633, 1973
16. SHRADER RI, DIMASCIO A: *Psychotropic Drug Side Effects*, Baltimore, Williams and Wilkins Company, 1970
17. STENZYL KH, REIDENBERG MM, RUBIN AL (Eds): Combined seminar on the use of drugs in renal failure. *Am J Med* 62:527-554, 1977
18. LEVY NB: Sexual adjustment to maintenance hemodialysis and renal transplantation: National survey by questionnaire. *Trans Am Soc Artif Intern Organs* 19:138-143, 1973
19. KAPLAN DE NOUR A: Some notes on the psychological significance of urination. *J Nerv Ment Dis* 148:615-623, 1969
20. LIM VS, FANG VS: Gonadal dysfunction in uremic men. *Am J Med* 58:655-662, 1975
21. GUPTA D, BONDSCHU HD: Testosterone and its binding in plasma of male subjects with chronic renal failure. *Clin Chim Acta* 36:479-484, 1972
22. ANTONIOU L, SHALHOUB RJ, SUDHAKAR T, SMITH JC, JR: Reversal of uremic impotence by zinc. *Lancet* 2:895-898, 1977
23. MASSRY SG, GOLDSTEIN DA, PROCCI WR, KLETZKY OA: Impotence in patients with uremia: A possible role for parathyroid hormone. *Nephron* 19:305-310, 1977
24. FISHER C, SCHIAVI RC, EDWARDS A, DAVIS DM, REITMAN M, FINE J: Evaluation of nocturnal penile tumescence in the differential diagnosis of sexual impotence: A quantitative study. *Arch Gen Psychiatry* 36:431-437, 1979
25. BREUER J, FREUD S: Studies on hysteria, in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, edited by STRACHEY J, London, The Hogarth Press, 1955, p. 305
26. BASCH SH: Observations on body image in renal patients, in *Psychological Factors in Hemodialysis and Transplantation*, edited by LEVY NB, New York, Plenum Publishing Corp., in press
27. BLACHER RS, BASCH SH: Psychological aspects of pacemaker implantation. *Arch Gen Psychiatry* 22:319-323, 1970