

## Delayed Adjustment Disorder in Adolescent Recipients After Living Related Renal Transplantation

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Here we report a retrospective assessment of four adolescent recipients who developed borderline personality states between 1–6 years after receiving kidney transplants donated by their mothers. Even though such patients can be diagnosed as having borderline personality disorder using psychiatric operational diagnostic criteria, it is better to consider them as having adjustment disorders considering their long-term course and therapeutic strategy. The symptom characteristics included predominance of somatic symptoms, disturbance of inter-personal relationships, insufficient impulse control, emotional instability, acting-out and long-term regressive hospitalization. The outcome was invariably poor. One of the patients died of pneumonia after a massive self-inflicted drug overdose, and another two currently remain in an unstable condition. Only one patient is emotionally stable, although she has returned to dialysis. The basis of the psychiatric manifestation can be considered to be a symbiotic relationship between donor (mother) and recipient (child) and dependence on the hospital where the transplantation was carried out. The patients' developmental levels including intelligence are also discussed. Systems for regular long-term psychological support are needed not only for recipients but also for donors before and after transplantation. In such patients, long-term hospitalization in the transplantation ward must be avoided because it can cause regression of their mental state.

**Key words:** living-related renal transplantation, recipient, adjustment disorder, borderline personality disorder

### Introduction

In 1990, Wolcott stated that the long-term influence of organ transplantation on recipients in the infant and adolescent period is one of the most important themes of clinical research in organ transplant psychiatry<sup>1)</sup>. Although about 14 years have passed since then, few follow-up data have become available, especially for cases 5 years or more after transplantation. Fukunishi et al reported that recipients who underwent living related kidney transplantation while still attending school showed an increased incidence of adjustment disorder with time after transplantation, despite a converse decrease in separation anxiety<sup>2)</sup>. They estimated that the in-

cidence of adjustment disorder was about 33% (n = 53) in their subjects as a whole at 1–2 years after transplantation.

Here we report a retrospective assessment of four young patients who developed borderline personality states between 1–6 years after receiving kidney transplants donated by their mothers. These patients were given supplementary treatment in the psychiatric department because of the seriousness of their mental condition. In view of the therapeutic strategies adopted, these cases were considered to be a type of delayed adjustment disorder after renal transplantation. Here we discuss mainly the longitudinal course, cross-sectional sym-

ptomatology, changes in familial dynamics—especially between the patients and the mothers— and the possibility of psychiatric treatment.

### Methods

The longitudinal course, cross-sectional symptomatology, changes in familial dynamics before and after transplantation, and the psychiatric outcomes of the four cases are presented in the following case reports from the viewpoints of psychopathology and psychiatric symptomatology. The possibilities of psychiatric treatment are also discussed. The case reports have been modified in order to omit details that are not relevant for discussion, bearing in mind the need to protect the patients' privacy.

### Case Reports

#### Case A: female born in 1975

The patient was the second in a family of 6 children. The family was of low socioeconomic status and was suspected to have a low level of intelligence. The parents were busy managing a restaurant and caring for the patient's young siblings. The parents described the patient as cheerful and conscientious, but hospital staff who knew her from childhood described her as passive and quiet.

At the age of 3 she developed renal failure due to congenital vesicoureteral reflex, and at the age of 12 she began to have hemodialysis 3 times a week. Consequently, she spent much of her childhood having little contact with healthy people. Her parents did not take an interest in the details of her condition and treatment, and they entrusted much of her care to the hospital staff. She was frequently absent from school, and attended a special needs class in junior high school. After she graduated from junior high school, she took a part-time job in an activity center for physically handicapped children. At the age of 14, she and her parents requested a renal transplant after recommendation by a pediatrician, and the following year, the patient received a renal transplant donated by her mother.

After transplantation, she was prescribed steroids and immunosuppressants, and her kidney functioned well. She was able to carry out domestic work and sometimes helped her parents in the restaurant. At this time, she had not expressed any

anxiety and seemed untroubled; she also performed her tasks competently. Later, however, she became increasingly agitated and claimed her health was getting worse. She underwent medical examinations for fever, fatigue, nausea, and abdominal discomfort. Physical examination revealed no abnormalities, and results of routine blood tests were all well within normal limits. As psychological problems were suspected, she began to receive counseling, and her various physical symptoms improved. However, because of financial problems, the counseling lasted only 10 months. Thereafter, she became agitated again and her physical symptoms returned.

Three years after transplantation, the patient was readmitted due to graft rejection. After treatment with steroid pulse therapy, the condition of her kidney improved. However, she continued to suffer from fever, fatigue, and loss of appetite. One month after readmission, her condition suddenly worsened and she developed weakness in all 4 limbs. She was unable to walk, and claimed to suffer from dizziness. Her condition degenerated until she was no longer able to take food orally, necessitating intravenous fluid supplementation. She was transferred to the pediatric ward of Tokyo Women's Medical University Hospital for neurological examination. Thorough neurological and medical tests failed to reveal any somatic disease, so she was finally referred for psychiatric evaluation.

Upon presentation for mental examination, she looked younger than her age, was short and thin, and had a moon face. During the interview she spoke slowly in a quiet voice, and appeared to be anxious and depressed. She said that she was worried about her physical condition only, but she did not seem very concerned. She denied having any other problems, although her verbal communication ability seemed poor.

After the interview, she began to walk with a walker and appeared more eager to do walking practice. However, whenever home visits during the hospitalization period were planned, she suffered hyperventilation attacks, which always disappeared when the planned visits were abandoned.

Although, gradually, she became able to walk unaided, she continued to report numerous physical symptoms and appeared to suffer from back pain. She was still not eating at this point.

Five months after admission to the pediatric ward, she was transferred to a psychiatric ward, where she later suffered frequent hyperventilation attacks. However, when she developed pyelonephritis of her transplanted kidney, her psychiatric condition improved. After the pyelonephritis subsided, she became increasingly agitated and exhibited self-mutilating behavior. After several interviews she gradually became more talkative. After the self-mutilation episode, she claimed she had not known what she was doing. During the family therapy sessions, she talked to her mother for the first time about herself and the hard time she had had at home after transplantation. However, her mother was unable to accept her daughter's position, and showed resistance and refusal to participate fully in the family therapy.

The patient expressed regret at having received the transplant, and stated that she had never been agitated and confused when receiving hemodialysis. During her home visit, she had felt unable to refuse the work her mother asked her to do, and she talked about her sense of guilt towards her mother because of her kidney donation. At this point, she talked about, and showed signs of anxiety about her mother's lack of understanding about her disease, and became aware of her self-mutilation behavior. When intravenous feeding was stopped, she became very afraid of discharge from hospital. Additionally, she became increasingly depressed and lacking in energy, spending most days in her room. A few days later, she began to suffer from ileus. Although she later recovered, her self-mutilation behavior reappeared. She claimed to be suffering from gait disturbance, but this did not appear to be genuine. She attempted to leave the hospital without notifying the hospital staff, and began to drink alcohol and display bulimic behavior and vomiting. At this time, she discovered that her mother was pregnant again, and began to look toward to the prospect of nursing a baby at home. When the time came for

her discharge from hospital, she was able to accept it with only slight anxiety.

After this first admission, she was again hospitalized twice in our psychiatric ward, mainly because of the conflict with her mother. She continued her efforts to work and attend rehabilitation programs, but was not successful. Sometimes her mother told her to get a job, and she was soon readmitted to hospital following a massive drug overdose. At hospitalization she seemed pleasant, possibly due to unspecified somatic symptoms or drug intoxication. In February 1997, she was admitted to the hospital where she had undergone transplantation because of a massive drug overdose, and died shortly afterwards due to pneumonia.

**Case B:** female born in 1973

The patient was the elder of two sisters of a middle class family. Her father was a real estate agent and the mother a housewife. Her mother described her as quiet, honest and friendly, and good at keeping promises, especially with her parents.

She developed renal dysfunction at 3 years of age. As her hospitalization extended over a long period, she attended school in the hospital from 6 to 13 years of age, and adjusted very well. At the age of 14, she began to have peritoneal dialysis (PD), for which her mother was mainly responsible. This allowed her to transfer to public junior high school and high school. At 18 years of age, she passed an entrance examination to a junior college, but had to be hospitalized just after entrance of trouble with PD. Her admission was prolonged, and she decided to give up the college course. After learning medical office work, she began to work at a hospital at the age of 19. After this time, her appetite decreased gradually and she sometimes vomited. Her physician suggested that she change from PD to hemodialysis, but she did not accept this because of fear about the shunt procedure. Her physician did not recommend renal transplantation positively because of the low success rate for patients with focal glomerulosclerosis. However, her mother was very enthusiastic about transplantation for her daughter because she considered it the only solution for her condition. The patient appeared to accept this pas-

sively, and at the age of 20 she received a kidney transplant donated by her mother. She overcame some crises related to graft rejection, and was able to return to her medical office work at the hospital without absence, and sometimes made an effort to listen to the views of her mother.

At the age of 22, immunological graft rejection occurred, and she was hospitalized for the first time since transplantation. Her physician informed her that her renal function would decline gradually and that she would have to return to dialysis in the near future. After discharge the patient took a part-time job in a bookstore to lighten her workload, and there her contact with young people increased. As her time with young friends increased, she began to stay out late at night, and as a result sometimes forgot to take her medication. She became more irritable and took a defiant attitude with her mother when scolded, so her mother gradually avoided verbal communication with her. She became sexually attracted to one of her young male friends, but he rejected her advances and attempts to be treated as a normal healthy woman. Thereafter, she began a strict diet, and lost 7 kg in 2 months, despite the fact that she had already been in the lowest percentile for normal body weight. She was unable to sleep well and looked depressive.

At the age of 23, she visited the psychiatric clinic with an introduction from her physician. She looked younger than her real age, and was small and thin. Though her attitude was cooperative and submissive, her continuous smiling throughout the interview seemed unnatural. She explained that her dieting had been triggered by fear of both her moon face and increased weight due to her steroid treatment. She complained mainly about her loss of sexual self-confidence and her changing relationship with her mother. While she wanted to be recognized as an adult woman, her self-esteem was so low that she was afraid of not being able to meet her mother's expectations. Indeed, she felt a sense of guilt toward her mother, who had donated her kidney.

At the fourth interview with us, the mother also attended, and described the process leading to her

decision to donate her kidney. She had undergone surgery for breast cancer at the age of 40, and had decided at that time to give her daughter her kidney if she was able to live to the age of 50. She felt loss and anger at her daughter's attitude. Also, although her husband had never participated in his daughter's life while she was receiving medical treatment, he had often criticized the mother for excess parental control. The mother said that in all honesty, she had envisaged gaining independence for herself after transplantation, because she had spent so much of her life aiding her daughter in the struggle against her disease. The patient visited us twice a month for interviews, and was sometimes accompanied by her mother. As a result of putting these conflicts into words, the patient gradually became able to eat. However, the relationship with her mother continued to be deadlocked.

In August of the same year, she began to show a tendency for hypnotics abuse whenever she felt anxiety, and in September she was admitted to the kidney center due to an overdose of hypnotics. As she trusted her physician and medical staff in the transplant ward, she asked to be hospitalized for as long as possible. At the time of admission she stated that she owed her existence to the medical staff, and that she had become reconciled to the fact she would eventually require hemodialysis. The transplantation had brought her close to becoming a healthy woman, but at the same time had given her a painful life. She also expressed fear about receiving hemodialysis. She was hospitalized twice in December of the same year following massive overdoses of hypnotics, and at the time of the second admission her renal function had become so impaired that hemodialysis was the only remaining option. Because of the patient's emotional instability we recommended that her mother be in constant attendance. As a result of this experience, they seemed to regain their symbiotic relationship that existed before the transplant operation. At the present, she is able to do part-time work while receiving hemodialysis twice a week. She sometimes becomes depressive, but has no other symptoms such as anorexia, and has not had any further massive drug

overdose.

**Case C:** male born in 1978

The patient was the first son of two children in a middle-class family. His father was a public servant, and his mother was a caring school staff; both were university graduates. The mother said that before renal transplantation, the patient was sometimes indecisive, quiet and passive-aggressive.

At the age of 8, the patient was found to have a high urine albumin level at a school medical examination. Because the father had opposed the mother continuing work after having children, he considered that his son's illness had been the result of her irresponsibility. As a result, the relationship between the parents had become increasingly worse, and they had little communication with each other.

At the age of 11, the patient began hemodialysis, and was able to attend school without absence. At the age of 12 years, he received a renal transplant donated by his mother. The mother was responsible for all of the transplant-related decision-making in the family. The renal pediatrician noted that before and after the transplant operation, the relationship between the patient and his mother seemed to be very symbiotic. Although the kidney functioned very well, the patient's school life after transplantation did not live up to his expectations. In junior high school he had to face the fact that he was physically weaker than his friends, and gym classes in particular were too hard for him. Therefore he was determined to be superior to his friends in his studies. However, not all high schools to which he applied were interested. The high school whose examination he passed was far from his house, necessitating 1.5 hours commuting one way. However, he seemed to adjust well to his new circumstances, at least superficially. His mother recommended him to obtain some vocational qualification, such as a chemist, and this was not opposed by the father. Therefore, his aim was to sit an entrance examination to a university pharmaceutical department, and he studied hard during his last year at high school. However, just before his university entrance examination, he suffered sudden retinal delamination, and was profoundly shocked about having to

give up his goal. Thereafter, the patient began to feel alienated from his family. He also avoided communicating with his mother. He refused to eat what his mother made, and his weight decreased gradually. He felt rejected by his friends in the hospital, and visited our clinic in May after recommendation by his pediatrician. He was diagnosed as having depression and asked to attend regularly, but he did not continue. His appetite became worse, and his weight decreased sharply around New Year, coinciding with the admission test season. He was hospitalized at the kidney center in February because of emaciation and suicidal ideation.

Investigation revealed no somatic disease that would account for the appetite and weight loss. In March we visited him as a member of a liaison-consultation group to the kidney ward. The patient poured out a stream of complaints, sometimes sneering at own his pain and disappointment. Although he ignored his parents, he showed an infant-like compliance with his pediatrician and the medical staff, and was happy to accept intravenous infusion. We interviewed the patient and his mother once a week, but interviewed the father only once. As familial communication was so complicated, we considered it inadvisable to begin family therapy soon. The patient appeared to eavesdrop on conversations in the nurse center, and was sensitive about his reputation on the ward. Then, unexpectedly, he passed the entrance examination for the junior college of his choice. However, he found it difficult to decide whether to attend school, where it would be difficult to get a chemist's license. He began to criticize his pediatrician for not being able to solve his problem, and took a fractious stand against her. It became difficult for medical staff to conceal negative feelings against him as his hospitalization was prolonged. He resented our recommendation that he be discharged because he was not making progress in the hospital. However, in order to attend the entrance ceremony of his junior college at the beginning of April, he finally left hospital. After discharge he returned to his life of sleeping by day and waking at night, and never went to college. Remarkably, however, his drug compliance was good

throughout the course. At present, only his mother visits us once a month for interview. She has said that although the patient is still totally non-communicative with his family, he has begun to eat only salad, which the mother makes in his room. Sometimes he eats items he buys in convenience stores during the night, so his weight is not decreasing. He now seems to be preparing again for entrance examinations next year.

**Case D:** male born in 1971

The patient was the youngest in a family of 3 children. The family were middle class, the father being a company employee and the mother a housewife. His mother described the patient as being originally gentle and kind. He was a sociable person and liked to chat with strangers. Although his school record was not outstanding, his memory ability was remarkable.

Since birth, he had suffered from many diseases such as congenital glaucoma, aniridia, hypospadias and cryptorchism. At the age of 18 months, his right kidney was extirpated because of Wilm's tumor. At the age of 2 years he underwent partial resection of the small intestine due to ileus, which was a side effect of cobalt irradiation. At the age of 2 years 6 months, 1/3 of the left kidney was also removed because of Wilm's tumor. Thus, by the time he became 5 years old, he had undergone surgery many times. At junior high school he was bullied, and had to be transferred to a school for the blind because of his poor eyesight. As his mother took great care of him, the two seemed to have a symbiotic relationship.

At the age of 15 he began to receive hemodialysis. After graduation from the school for the blind, where he had adjusted well, at the age of 18, he attended a special program for handicapped young people. At the age of 20 he became totally blind, and underwent retraining in a rehabilitation home for the blind. Although his parents observed that he sometimes seemed emotionally immature, he generally adjusted well to his environment during this training period.

At the age of 23, the patient received a renal transplant donated by his mother because his par-

ents requested his physician that his burden of handicaps be reduced. As the kidney functioned very well, he finished the curriculum at the rehabilitation home the following January. Because of dullness of his fingertips, probably due to the side effects of immunosuppressants, he was unable to read or write Braille. This disability hindered his progress because there were few job training schemes for blind people without Braille literacy. Because of increasing time at home, the patient became irritated. He was unable to sleep well, and sometimes vented his anger on his parents, especially the mother, for no reason. The year after the transplant operation, he attended an alumni party at the blind school, and there, some of his friends began bragging about their sex experiences and mocking him for his own lack of sex experience. This hurt his pride very much, and he lost confidence. Subsequently, his behavior became totally desperate. He stopped taking his medication, and wandered about town with no special aim. When questioned by his mother, he drove his parents angrily out of the house. Also, he began to quarrel with his friends over trifles.

A short time afterwards, he visited us with his mother after an introduction from his physician. He refused to be interviewed with his mother, so we interviewed them separately. He was very small and thin with a moon face. He was cooperative with us, although in a roundabout way, so we had to keep asking him what he wanted to say. In addition to his sexual distress, he told us of his conflict about the course of his future life. While he wanted to be independent, those around him were not helpful. As well as sleeplessness, numerous dreams and emotional instability were observed. Therefore we prescribed hypnotics and a mood stabilizer, in addition to holding regular interviews. Just after visiting us, his kidney's function became slightly worse, and the patient became frightened of immunological rejection. He told that he had experienced few problems during hemodialysis, that it might have been better if he had not received a kidney transplant, and that his relationship with the mother had become difficult after the transplant operation. The

**Table 1** Clinical profile of cases

	Cases			
	A	B	C	D
Sex	F	F	M	M
Age at diagnosis of CRF (y)	3	3	8	15 (Wilm's tumor)
Start of dialysis (y)	12	14 (PD)	11	15
Age at Transplantation (y)	15	20	12	23
Manifestation of maladjustment (y)	18	23	18	24
Donor	mother	mother	mother	mother
Outcome of transplantation	good	return to HD	good	good
Psychiatric course	death (22 y) due to self-inflicted drug overdose	stable after HD	unstable	unstable

F: female, M: male, CRF: chronic renal failure, PD: peritoneal dialysis, HD: hemodialysis.

patient left the house early every morning to fill up his surplus time, then wandered around the hospital visiting acquaintances. He belonged to a number of groups of handicapped persons, and was afraid of being desired by individuals. He quit work therapy in the psychiatric department because of his unstable interpersonal relationships. He wavered intensely between positive feelings and negative feelings toward the medical staff. He showed fluctuation between emotional instability and comparative stability, and because of night-time sleeplessness, he developed a reverse day/night schedule. Whenever there was even slight unpleasantness, he suddenly over-reacted violently and damaged furniture, driving his parents from the house. This tendency continued until his recurrent hospitalization in the kidney center during the winter because of cystitis and ileus. He reacted sensitively to his worsening renal function, and tried to stay in hospital for as long as he could. After discharge the following spring, he tried word processing and tea ceremony classes, but they didn't last long. From the middle of June he refused to take any medicine or to eat, drove his parents out of the house, and shut himself up. At the beginning of July, he was admitted to the kidney center due to severe dehydration. For crisis intervention, we transferred him to the psychiatric ward after physical treatment. After 3 weeks of hospitalization, he was discharged to prepare for acceptance to training facilities for the blind, where he intended to stay for 1 year in institutional accommodation. However, he left of his own accord within 4 months because of trouble with other students.

### Discussion

In our hospital almost all of the recipients and donors of renal transplants are interviewed from the viewpoint of psychonephrology by a psychiatrist before and after transplantation in the kidney center. The four reported patients were given supplementary treatment in the psychiatric department because of the seriousness of their psychiatric course. Using the diagnostic criteria of DSM-IV-TR<sup>3)</sup> or ICD-10<sup>4)</sup>, patients A and D were diagnosed as having borderline personality disorder (BPD). The other two patients, B and C, were considered to have BPD tendencies. However, considering the therapeutic strategy, we believe it is better to consider all such patients as having potential adjustment disorders, in view of their similar backgrounds.

Reynolds et al compared the social adjustment of 45 young adult renal patients who commenced treatment for end-stage renal disease as children with that of 48 age- and sex-matched controls<sup>5)</sup>. The renal patients were less socially mature than the controls; more of them lived with their parents, fewer had an intimate relationship outside the family, they had fewer school qualifications, and there was more unemployment among them. Even though there were some differences among the present four patients, they shared some of the common points mentioned above. First, all of the patients had suffered from chronic renal failure as children and received dialysis in their early teens (Table 1). Their adjustment to circumstances before transplantation was seen as satisfactory—at least super-

**Table 2** Psychological background of psychiatric manifestations

	Cases			
	A	B	C	D
Intelligence	low	normal	normal	borderline
Adjustment before manifestation	too adaptive	adaptive	too adaptive	adaptive
Social situation before manifestation	domestic work helping parents	part-time job	student	unemployed
Trigger of manifestation	hospitalization due to rejection	sexual disappointment	giving up entrance examination	sexual disappointment
Mother-child relationship before transplantation	neglect	symbiotic	symbiotic	symbiotic
Feeling toward mother after transplantation	ambivalent sense of guilt	ambivalent sense of guilt	refusal	refusal
Desire to be independent after transplantation	little	moderate	strong	strong
Mother's attitude after transplantation	demand to work	desire for her own life	manipulative	manipulative
Father's participation	rare	rare	rare against mother	rare

ficially—not only within the family system but also in the medical setting. The patients received transplants from their mothers in their early years before their essential social participation in advanced schooling or jobs. After a latent period of 1–6 years after transplantation, psychiatric symptoms were triggered by hospitalization due to a rejection episode (case A), loss of sexual self-confidence (cases B and D), and having to abandon an entrance examination due to unexpected blindness (case C). It is well known that fear about possible rejection of a transplant often develops slowly<sup>6</sup>. In addition to possible graft rejection, which can trigger psychiatric symptoms in recipients of all ages, sexual disappointment and failures in school life can also create crisis situations for young recipients. Many recipients of living related transplants feel a sense of guilt once the donor is selected, and these feelings can become apparent over considerably different time spans according to individual patients. The period from transplantation to the manifestation of psychiatric symptoms, during which the patients may appear to have adjusted relatively well, can be considered one of overadjustment.

Few reports have referred to the predictors of poorer psychiatric or social outcomes of living-related transplantation. Reynolds et al emphasized that the majority of renal transplant patients were employed, and that the level of subjective stress and support derived from their work was comparable to that of controls. However, they highlighted two predictors—early onset of illness and current

health problems—that were associated with a poorer social outcome<sup>5</sup>. According to their definition, our patients may have been in a high risk group for poorer social outcome even before transplantation. The risk for patient D would have been higher than that for other patients because of his blindness.

Three of the patients (cases A, B and C) appeared to be anorexic with weight loss at the early stage. Besides eating behavior disorders, some somatic symptoms such as high fever, epigastralgia, cystitis, and ileus were recognizable. At the same time, borderline personality-like symptoms surfaced. These were disturbances of interpersonal relationships, insufficiency of impulse control, emotional instability, and acting-out represented mainly by self-injury. While the negative feelings directed toward the mother were remarkable, the hospital became a safe haven where the patients regressed mentally. Indeed, treatment non-compliance was rare.

Predominance of somatic and somatising symptoms was one of the important characteristics in these cases. A spectrum of symptoms ranging from unspecific vegetative symptoms (case A) to conver-sive symptoms or self-injury (case A, B) was evident. Anorexia and weight loss were the most common symptoms, but they were not severe and continuous like those of eating disorders. It is remarkable that anorexia, or refusal to eat, represented a symbol of denial against the mother (especially in cases B and C). On the other hand, the patients wished to be treated as helpless, sick children, and



their desire for hospitalization was obvious. It was notable that their regression began just at the time of admission, and that drug overdoses were used as a means of being admitted, especially to the hospitals where they had received their transplants and been “reborn” (cases A and B). In this sense, they used their own bodies to seek attention from others. Only patient A showed conversive symptoms, which could have been related to her intelligence.

With regard to the background of adjustment disorder in the recipients, three psychological and developmental problems can be highlighted. The first problem concerns the parent-child relationship. It is known that a symbiotic relationship can easily form between a child receiving HD and the mother<sup>7)</sup>. This tendency was also observed in our patients. It must also be noted that, behind the symbiotic relationship, the mothers had feelings of guilt towards their severely sick children. Only in case A the possibility of neglect could be considered. Because of her large, low-income family, the patient became institutionalized at the hospital (Table 2). After transplantation, the patients’ relationships with their mothers changed gradually but markedly. Two female kidney recipients showed ambivalent feelings toward their mothers as a result of guilt toward them as the recognized donors. Indeed, the mothers seemed to experience a sense of relief after becoming donors. The mother of patient B expressed a desire to have her own life. In the two males, there was a strong desire for independence to escape manipulation by their mothers. This indicates painful and insufficient polarization of their symbiotic relationships. Such polarization can cause borderline-like symptoms, because it can lead to serious abandonment anxiety. Participation of the fathers in their children’s illness was rare or indirect. Furthermore, in case C the parent’s marital relationship was almost broken before the transplantation; it has already been pointed out that unresolved pretransplant psychological problems can lead to psychiatric symptoms after transplantation<sup>5)</sup>. In this case, the patient seemed to identify himself as the only person who could stop the final break-up of his parents’ marriage.

The second problem centers on the relationship between hospital and recipients. The hospital in which the transplant operation was performed can sometimes be recognized as a home where the patient was “reborn”. Before transplantation, such patients would have been submissive and dependent on hemo- or peritoneal dialysis, spending a large proportion of their life in institutions for medical treatment. Therefore, after successful transplantation, recipients can also feel anxiety about becoming separated from the hospital and staff.

Finally, the developmental level of patients—including their intelligence—also needs to be discussed. The simplistic thinking and actions of patients A and D seemed to reflect their low intelligence. As Reynolds et al pointed out, an early onset of illness and an isolated environment could have affected their social development and character.

Looking back over the patients’ courses, the outcome was invariably poor. Patient A died of pneumonia after a self-inflicted drug overdose, and patients C and D remain in an unstable condition. Only patient B is stable emotionally, although she has returned to dialysis.

Our present cases seem to represent severest and rarest in the spectrum of adjustment disorders after living-related renal transplantation, whose incidence was estimated by Fukunishi et al to be 33% of all subjects. However, some of our experiences with these cases will be helpful for subsequent therapeutic trials. As one of the fundamentals of adjustment disorders, it is necessary to recognize the relationship disorders between the recipient and donor. As psychological problems and psychiatric symptoms of donors have been receiving more attention recently<sup>8)~10)</sup>, it seems very important for psychiatric therapists to give regular support to both the donor and recipient before and after transplantation, as sometimes the donor needs more attention than the recipient. If maladjusted recipients must return to dialysis, we should not keep them waiting too long. Hospitalization without a clear purpose must be avoided, because a long stay in hospital, especially if the hospital is the same as that where the original transplant operation was per-

formed, can cause regression of their mental state. In particular, somatic symptoms whose cause cannot be diagnosed physically should always be carefully considered in case they are psychosomatic symptoms heralding a crisis.

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### 生体腎移植後の思春期レシピエントにおける遅延性適応障害

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カモトシヨ  
加茂登志子

母をドナーとして生体腎移植を受けた後, 1~6年後に境界性人格障害状態を呈した4人の思春期レシピエントについての後方視的評価を報告する. 精神医学的操作的診断基準を用いた場合, 彼らは境界性人格障害と診断されるが, 長期的経過と治療戦略から, 遅延性適応障害との位置づけが適当であると考えた. 精神症状の特徴は身体症状の優勢化, 対人関係障害, 衝動制御不全, 情動不安定性, 行動化, そして長期にわたる退行的入院である. 転帰はおしなべて不良であった. 1例は大量服薬の後肺炎で死亡し, 他の2例は不安定な状態にある. 透析に戻った1例のみが情緒的に安定した. 精神症状の発現の基盤には, ドナー(母親)・レシピエント(子ども)間の共生関係と移植を受けた病院への依存, 知的能力を含めた発達水準の問題などが指摘された. 移植術前後にわたる, レシピエントのみならず, ドナーに対する長期的, 定期的心理サポートシステムが必要とされる. この場合, 移植病棟への長期入院は退行を引き起こすため回避されるべきである.