

Psychiatric Aspects of Renal Transplantation

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SUMMARY

This report pertains to the psychiatric problems in renal transplant recipients and its socio-demographic correlations.

50 male recipient subjects with a post-transplant period ranging from six months to six years were evaluated through tape recorded interviews to study their pre and post-operative emotional reactions. A psychiatric examination was performed by two psychiatrists and a diagnosis given wherever necessary.

On examination 46% of cases had identifiable psychiatric problems, mainly Anxiety Neurosis (18%), Depressive Neurosis (18%), Adjustment Reactions (10%), Non-organic (Psychogenic) pain, excessive somatic concern and personality changes were also noticed in some. The psychiatric illness was significantly more amongst unmarried ($P < .05$) and higher education group ($P < .02$). Other variables had no significant correlation with the psychiatric illness. None had psychoses or a major depressive disorder. Thus, psychiatric problems are present in particular groups of transplant recipients and are usually neurotic in nature and would require psychiatric help regarding these.

Renal transplantation has proved to be a life saving measure for patients suffering from certain chronic renal problems. Many centres in the country are presently carrying out the transplant surgery. Since it is a major surgical procedure, the medical, surgical and immunological problems of transplantation are well documented, but attention needs also to be paid to the psychological problems these patients face (Cramond, 1967). Study of psychiatric aspects of renal transplantation also provides an avenue to understand the acceptance of another's internal organ into the body and the individual's attitudes towards such a vital donation (Abram 1978).

Kuruville (1975) has reviewed some of the studies on psychological reactions and difficulties of the patients undergoing transplantation, and reported significant psychiatric problems in 9 out of 26 recipients studied. The commonest psychiatric complications observed are depression, anxiety, phobia (Kemph, 1966; Colomb and Hamburger, 1967; Short and Harris, 1969;

Ferris, 1969; Penn, 1971; Kuruville, 1975), Psychosis (Kemph, 1966; Ferris, 1969, Short and Harris, 1969), hostility and dependence (Cramond, 1967). In various studies rate of psychiatric complications or reactions range from 20-57% (Colomb and Hamburger, 1967; Ferris, 1969; Abram, 1972).

This study has attempted to evaluate psychiatric problems in a group of renal transplant recipients and correlate them with certain socio-demographic and illness variables.

Material and Methods

50 Male recipient subjects with a post-transplant period ranging from 6 months to six years were evaluated through tape-recorded interviews based on a semi-structured interview proforma. The interview proforma was designed to tap pre and post operative emotional reactions, adjustment problems and psychiatric symptoms. A psychiatric examination was performed jointly by two psychiatrists and a psychiatric diag-

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nosis given wherever necessary, by mutual discussion. The diagnosis were given according to the International Classification of diseases, 9th revision (WHO, 1978). The socio-demographic data was recorded on separate form for every patient. A brief period of time was used to establish rapport. Most subjects were co-operative and participated willingly in the investigation. Details were also taken from relatives accompanying the subject to increase the reliability.

Results

Only male subjects were studied as female subjects were very few in number and hence excluded to keep the sample homogenous. 34% of patients were between 20-29 years and 50% between 30-39 years age. 36% were unmarried, 32% came from nuclear family, 56% above matric and 38% from higher-socio-economic status. All but 4 had a transplant period less than 5 years. 30% of subjects had duration of illness (renal failure) less than one year and 92% had duration less than five years. Two subjects had received cadaver kidneys and others had received from a living near or distant relative.

46% of patients had identifiable psychiatric problems of which 18% were anxiety neurosis, 18% depression, 10% adjustment reactions. Of these patients some had non-organic pain (chronic) and hypochondriacal features. Three subjects showed personality changes but did not have specific personality disorder. None had psychosis (Table 1). Table 2, 3 and 4 display the distribution of psychiatric problems according to socio-demographic characteristics, duration of illness and post-transplant period. Psychiatric problems are significantly more in unmarried ($P < .05$). Psychiatric problems are also more in students and retired people and in those

Table 1
Psychiatric Diagnosis in Renal Transplant Recipients

	N	%
No Psychiatric illness	27	54%
Psychiatric illness	23	46%
Diagnostic Breakdown (I.C.D.9)		
• Anxiety Neurosis	9	18%
• Depressive Neurosis	9	18%
• Adjustment Reaction (With disturbance of emotions)	5	10%
In association with Neurosis		
Non Organic Chronic Pain	4	8%
Hypochondriacal features	4	8%
Personality changes	3	6%

coming from higher economic background. However, these do not achieve statistical significance. On examining the relationship between psychiatric complications and post-transplant period, it is observed that 14 out of 22 recipients with less than 2 years of post-transplant period had psychiatric illness ($P < .05$). In patients with longer post-transplant period fewer patients had psychiatric complications. Four cases had transplant period more than 5 years, but none of these showed any evidence of psychiatric illness. Psychiatric problems were more in high education subjects ($P < .02$).

Discussion

The problem of defining the post-operative complications following renal transplantation is a complicated one since psychiatric complications are defined variably by different investigators (Abram, 1978). This probably accounts for the variability in the rate of psychiatric disturbances. The rate of 46% in this study is comparable to other reports (Ferris, 1969; Penn, 1971),

and is higher than other studies (Abram, 1972; Colomb and Hamburger, 1967). Only 3 subjects in Kuruvilla's study on 26 recipients had post-transplant complications. Since the present study has not included the immediate post-transplant period various other psycho-organic or immediate drug complications or psychosis are not encountered. The emphasis of this study has been to identify psychiatric problems likely to be encountered in later periods after transplantation.

The main concern of these recipients were regarding body damage, rejection of transplant, complications of drugs and excessive somatic preoccupations. They also showed excessive body image disturbances, reported elsewhere (Chaturvedi, 1984; Pant et al 1985). Those who continued to have physical problems show more emotional problems during post-transplant period (Chaturvedi and Pant, 1985).

Table 2
Psychiatric Problems in Transplant Recipients
(socio-demographic correlations)

	Psychia- tric Problems No. (n-23)	No Psy- chiatric Problems (n-27)	P
Age:			
20-29 years	17	11	6 NS
30-39 years	25	8	17
Above 40 years	8	4	4
Marital Status:			
Single	18	12	6
Married	32	11	21 P<.05
Family Type:			
Nuclear	16	8	8 NS
Joint	34	15	19

The psychiatric complications are more in unmarried, higher education group and higher income group (Table 2 and 3) which could indicate the psychological nature of the problem. Of those educated above matric 61% have psychiatric problems as compared to only 27% of those with lesser education ($X^2 = 5.493$, $df 1$, $P < .02$). Similarly, the percentage of persons with psychiatric illness increases proportionally to income. 33% of those earning less than Rs.400/- Rs. 1000 P.M. and 58% of those earning above Rs. 1000/- report psychiatric problems. However, this was not statistically significant. The exact reasons are not known but the likely reasons for these findings could be due to high frustration, inferiority feelings and unrealistic expectations

Table 3
Psychiatric Problems in Transplant recipients
(Socio-Demographic correlations)

	Psychia- tric problems No. (n-23)	No Psy- chiatric problems (n-27)	P
Education:			
Upto Matric	22	6	16
Above Matric	28	17	11 P<.02
Occupation:			
Professional	13	7	6
Clerical	15	5	10
Skilled/Unskilled worker	14	5	9
Students/Others	8	6	2 NS
Income:			
Less than Rs. 400/- per month	9	3	6
Rs. 400/- - Rs. 1000/- per month	22	9	13
Above Rs.1000/- per month	19	11	8 NS

Table 4
Psychiatric Problems in Transplant Recipients
(Illness Variables)

	Psychia- No. tric illness (n = 23)	No Psy- chiatric illness (n = 27)	P
Duration of illness:			
Less than 1 year	15	8	7
1-2 years	16	7	9
2-5 years	15	5	10 NS
More than 5 years	4	3	1
Post transplant period:			
Less than 2 years	22	14	8
More than 2 years	28	9	19 P<.05

in these groups. The educated may try to acquire further knowledge on the complications, drug effects etc., and may get unduly worried with them. Whether this is specific to renal transplantation alone, cannot be commented upon. Neuropsychiatric and psychologic reactions are expected to be more in the immediate post-transplant period. It is also redeeming to note that as time elapses many of the psychological complications disappear or subjects are able to cope with them more effectively as evident from Table 4, where psychiatric complications are observed more during less than 2 years period after surgery and are significantly lesser subsequently. None of the 4 patients with post-transplant period more than 5 years had any psychiatric problem. Severe depression and anxiety, concern about body damage and sexual functioning have been noticed by most other studies (Kempf, 1967; Colomb and Hamburger, 1967). However, reports on personality alterations are not described. Three of the cases in the present series showed personality disturbances in the form of over-demandingness, obstinacy, irritability,

remaining aloof and over-sensitive, but these did not amount to an independent personality disorder.

Though the pre-operative psychiatric status was not known, from relatives' account there seemed to be no obvious psychiatric disturbance. Here, we have tried to identify the common psychiatric problems and those more likely to develop these. Certain other factors, like emotional relationship with the donor and family's attitude towards him are important in determining the post-transplant emotional reactions. These, however, could not be looked into, in the present study. Timely handling of these problems, after early identification, by counselling or supportive means would certainly reduce these reactions either in intensity or in duration. Kuruvilla (1975) has already emphasised upon the role of the psychiatrist in handling transplant surgery cases. This study further stresses upon the the active involvement of psychiatrist in long term management of renal transplantation subjects.

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References

- Abram, Harry S. (1978) Renal transplantation. In MGH Handbook of general Psychiatry. Ed. Hackett, Thomas, P & Cassem, Ned H. The C. V. Mosby Company St. Louis, P.365.
- Abram, Harry S. (1972). The Psychiatrist, the treatment of chronic renal failure, and the prolongation of life III. *Am. J. Psychiatry.*, 128, 1534.
- Chaturvedi, S. K. and Pant, V. L. N. (1984). Objective Evaluation of body image in renal transplant recipients. *Journal of Psychological Research* Vol. 28(1) 4-7.

- Chaturvedi, S. K. and Pant, V. L. N. (1985) Emotional reaction and long term emotional adjustment in renal transplant recipients. *Indian Journal of Psychological Medicine* (In Press).
- Colomb, G., and Hamburger, J (1967) Psychological and moral problems of renal transplantation. In *psychological aspects of Surgery*, Ed. Abram, H. S. Little, *Brown and Co. Boston*.
- Cramond, W. A. (1967) Renal homotransplantation; Some observations on recipients and donors. *Br. J. Psychiatry*, 113, 1223.
- Ferris, G. N. (1969). Psychiatric considerations in patients receiving cadaveric renal transplants. *So. Med. J.* 62, 1482.
- Kemph, J. P. (1966). Renal failure artificial kidney and kidney transplant. *Am. J. Psychiatry*, 122, 1270.
- Kemph, J. P. (1967). Psychotherapy with patients receiving kidney transplant. *Am. J. Psychiatry*. 124, 623.
- Kuruville, K., Rao, M. Mohan, Johny K. V. (1975). Psychiatric aspects of renal transplantation-1. Some observations on recipients. *Indian J. Psychiat.* 17, 26.
- Pant, V. L. N., Chaturvedi S. K., Varma V. K., Diwan S., Yadav R. V. S. and Chugh K. C. (1985). Long term life adjustment of renal transplant recipients. *Indian Journal of Psychological Medicine*. (In Press).
- Penn, I. (1971). Psychiatric experiences with patients receiving renal and hepatic transplants. *Semin. Psychiatry* 3, 133.
- Short M. J. and Harris N. L. (1969) Psychiatric observations of renal homotranplantation. *So. Med. J.* 62, 1479.
- World Health Organization (1978). *International Classification of Diseases, Ninth Revision*. Geneva.