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Anxiety and Depression: A Comparison Between Renal Transplant Recipients and Hemodialysis Patients

R. Karaminia, S.A. Tavallaii, M. Lorgard-Dezfuli-Nejad, M. Moghani Lankarani, H. Hadavand Mirzaie, B. Einollahi, and A. Firoozan

ABSTRACT

Background. Anxiety and depression are known causes of morbidity among patients with chronic illnesses. There is controversy whether hemodialysis or renal transplanted subjects have less severe anxiety or depression symptoms. We designed this study to evaluate these symptoms in the two groups of subjects.

Methods. In a case-control study performed in 2006, we randomly selected 32 transplant recipients and 39 hemodialysis patients. The two groups were matched for gender, age, marital status, educational background, and somatic comorbidities. Symptoms of anxiety and depression were compared between the groups using the Hospital Anxiety Depression Scale.

Results. Anxiety score was significantly lower among transplant recipients compared with hemodialysis patients (8.61 ± 3.09 vs 10.41 ± 2.77; $P = .01$). There was no significant difference between the two groups in the score for depression ($P > .05$). In transplant recipients, the severity of anxiety was higher among those with a history of graft rejection and those <35 years at the time of transplantation ($P < .05$). The severity of depressive symptoms was higher among subjects with lower educational status ($P < .05$).

Conclusion. Depressive symptoms did not seem to improve after renal transplantation, which highlights the need for screening and appropriate treatment of depression. Transplant recipients with a history of rejection or a young age at the time of transplantation should receive more attention for psychiatric problems.

PSYCHOLOGICAL disorders are prevalent among patients with end-stage renal disease (ESRD).[1] Renal transplantation, the treatment of choice for ESRD,[2] is highly stressful for patients despite its advantages.[3] High rates of emotional distress and psychological disorders have been reported after successful renal transplantation.[4] These disorders have a negative impact on patient outcomes in ESRD[5–7] and renal transplantation.[8] Among studies comparing mental health status during chronic hemodialysis and after transplantation, some have shown an improvement in anxiety[9] or depression after renal transplantation[10,11] and some have not.[12–14] The aim of this study was to compare the symptoms of anxiety and depression between chronic hemodialysis patients and renal transplanted subjects.

MATERIALS AND METHODS

In a case controlled study, 33 renal transplanted subjects and 39 hemodialysis patients were randomly selected from our registry of ESRD patients during Spring 2006. The inclusion criteria were as follows: stable clinical condition, absence of any acute concomitant disease or infection, history of ≥6 months hemodialysis for hemodialysis patients or an interval of ≥6 months from transplantation with satisfactory renal function (creatinine ≤2) for the transplant

From the Nephrology/Urology Research Center (NURC), Baqiyatallah Medical Sciences University (R.K., S.A.T.); the Clinical Research Unit, Baqiyatallah Medical Sciences University (M.L.-D.-N., M.M.L.); the Kidney Transplant Department, Baqiyatallah Medical Sciences University (B.E.); Azad University of Medical Sciences (H.H.-M., A.F.), Tehran, Iran.

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Address reprint requests to Behzad Einollahi, Baqiyatallah University of Medical Sciences, Vanak Square, Mollasadra Ave., PO Box 14155-6437 - Postal code: 1435915371, 19945-587 Tehran, Iran. E-mail: beinollahi@gmail.com

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group. The two groups were matched for gender, age, marital status, educational background, and somatic comorbidities ($P > .05$).

Symptoms of anxiety and depression were assessed using the Hospital Anxiety Depression Scale,[15] namely, a translated version that had been previously validated for the Iranian population.[16] The analysis was performed using SPSS version 13.0. Independent sample Student t test was used to examine differences in the mean scores of anxiety and depression between the study groups with $P \leq .05$ considered significant.

RESULTS

The mean age (±SD) of hemodialysis patients and transplanted subjects were 56 ± 12 years and 53 ± 7 years, respectively ($P > .05$). The two groups were not different in gender, level of education, family income, or comorbidity ($P > .05$). The anxiety score was significantly lower among the transplant group versus the hemodialysis patients (8.61 ± 3.09 vs 10.41 ± 2.77; $P = .01$). There was no significant difference between transplant and hemodialysis group with respect to the score of depression (8.77 ± 1.83 and 8.47 ± 3.42, respectively; $P > .05$).

In transplant subjects, anxiety was more severe among those with a history of graft rejection and those who had undergone renal transplantation before the age of 35 years. The severity of depressive symptoms was higher among those with lower educational status ($P < .05$). In hemodialysis patients, no significant correlation was observed between anxiety or depression symptoms and the studied variables ($P > .05$).

DISCUSSION

This study showed that symptoms of anxiety were less commonly seen among kidney transplanted subjects as compared with hemodialysis patients. We did not identify any significant difference in depressive symptoms between the two groups. Depression, however, can be a potential problem after renal transplantation, bearing in mind its association with noncompliance to medications, a known cause of graft loss.[17] The issue of depression following renal transplantation plays such an important role that even cases of suicide have been reported.[18] Such an event would be a real tragedy, given the high cost of transplantation and the risk engendered by a live donor.

Most previous studies have reported similar results on the improvement of anxiety after renal transplantation,[1,9] except for one study that contradicted our findings.[11] Similar to our findings, Kalman et al[13] reported no significant difference in the incidence of depression among renal transplant recipients versus hemodialysis patients, but other studies have shown the reverse to be the case.[10,11] Depression reduces self-esteem, leads to noncompliance to therapy, and may eventually lead to death.[19] Our results are in contrast with a report, which indicated that although patients on dialysis may present with moderate to severe depression, individuals undergoing successful kidney transplantation are less prone to develop major symptoms of depression.[20]

The nature and causes of depression among kidney transplant recipients are being increasingly recognized.[21] The living-related or cadaveric donor of kidney,[22] low family support,[23] return to dialysis after transplantation,[10] and use of specific medications, such as tacrolimus[24] or cyclosporine,[25] are known to expose recipients to greater levels of depression. In the study by Akman et al,[10] depression was significantly more common among single patients. There is therefore a greater need for the evaluation of depressive symptoms after renal transplantation in subjects with the mentioned risk factors.

In conclusion, depression in the posttransplant period continues to remain as severe as in the pretransplant phase. This should alert health care providers of referring kidney transplant recipients for psychiatric consultation, particularly to detect depressive symptoms, after renal transplantation. In this aim, clinicians should have a higher index of suspicion for depression among recipients with a history of graft rejection or young age at the time of transplantation.

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