

Letter to the Editor

Favorable Survival Rate after Kidney Transplantation in Diabetic Patients

To the Editor,

We read with great interest the article by Rajaeefard et al¹ published in your esteemed journal entitled "Graft survival rate following renal transplantation in diabetic patients." This retrospective study focused its message on drawing the attention of nephrologists to whether diabetes mellitus (DM) has an adverse affect on renal allograft survival among kidney transplant patients.

Although Iran has the largest reported experience of kidney transplantation among the Middle East countries,² there are limited data available on DM in Iranian kidney recipients. It is of interest that the estimated 9-year graft survival rate in 103 diabetic kidney transplant patients was favorable (84.2%). We also reported the 5-year outcome of kidney transplantation in 117 patients with DM and 135 patients without DM.³ There was no significant difference in graft survival between the two groups of recipients (log-rank, $P = 0.9$). We concluded that diabetic and non-diabetic kidney transplant recipients had similar short- and mid-term graft and patient survival rates. Multivariate analysis by Cox regression showed that age and gender of the recipient, donor source and DM had no adverse effect on mid-term outcome among our patients. Boucek et al reported a similar outcome in terms of 5-year patient and graft survival in diabetic and non-diabetic recipients.⁴ Similar to previous reports, Rajaeefard et al¹ did not find a significant poorer patient survival in diabetic patients

when compared with non-diabetic individuals.⁵⁻⁸

In the past, clinicians tended to exclude diabetic patients from kidney transplantation due to the adverse effects of immunosuppressive drugs and high morbidity and mortality after surgery. Although the reported outcome of kidney transplantation is inferior for diabetic than for non-diabetic patients,⁹ the survival of uremic diabetic patients who remained on chronic hemodialysis is significantly lower than diabetic transplant recipients.^{10,11} Nowadays, the number of diabetic patients is growing rapidly worldwide and kidney transplantation is generally accepted as a treatment of choice in these patients with end-stage renal disease (ESRD). In addition, it was demonstrated that the 1-year patient survival rate was similar in diabetic and non-diabetic transplant recipients,^{6,12} while others have shown that the 5-year patient survival rate was worse in diabetics compared with non-diabetic recipients.¹³⁻¹⁵

In summary, the study of Rajaeefard et al¹ and our study showed that diabetic patients with ESRD are not contraindicated for kidney transplantation and they carry a favorable and promising graft survival.

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References

1. Rajaeefard AR, Almasi-Hashiani A, Hassanzade J, Salahi H. Graft survival rate following renal transplantation in diabetic patients. *Saudi J Kidney Dis Transpl* 2012;23:707-14.
2. Einollahi B, Taheri S. Renal transplantation practice in Iran and the Middle East: Report from Iran and a review of the literature. *Ann Transplant* 2008;13:5-14.
3. Einollahi B, Heidary F, Einollahi H, Rostami Z. Favorable renal allograft and patient outcome after transplantation in patients with diabetes mellitus: A five-year single center experience. *Nephrourol Mon* 2011;3:291-5.
4. Boucek P, Saudek F, Pokorna E, et al. Kidney transplantation in type 2 diabetic patients: A comparison with matched non-diabetic subjects. *Nephrol Dial Transplant* 2002;17:1678-83.
5. Woo YM, Jardine AG, Clark AF, et al. Early graft function and patient survival following cadaveric renal transplantation. *Kidney Int* 1999;55:692-9.
6. Sutherland DE, Fryd DS, Payne WD, Ascher N, Simmons RL, Najarian JS. Kidney transplantation in diabetic patients. *Transplant Proc* 1987;19:90-4.
7. Ekstrand A, Gronhagen-Riska C, Groop L, Salmela K, Kuhlback B, Ahonen J. Results of kidney transplantation in patients with diabetic nephropathy. *Transplant Proc* 1987;19:1535-6.
8. Cosio FG, Pesavento TE, Kim S, Osei K, Henry M, Ferguson RM. Patient survival after renal transplantation: IV. Impact of post-transplant diabetes. *Kidney Int* 2002;62:1440-6.
9. Kjellstrand CM, Simmons RL, Goetz FC, et al. Renal transplantation in patients with insulin-dependent diabetes. *Lancet* 1973;2:4-8.
10. Parfrey PS, Hutchinson TA, Harvey C, Guttman RD. Transplantation versus dialysis in diabetic patients with renal failure. *Am J Kidney Dis* 1985;5:112-6.
11. Rao KV, Sutherland D, Kjellstrand CM, Najarian JS, Shapiro FL. Comparative results between dialysis and transplantation in diabetic patients. *Trans Am Soc Artif Intern Organs* 1977;23:427-32.
12. Sutherland DE, Morrow CE, Fryd DS, Ferguson R, Simmons RL, Najarian JS. Improved patient and primary renal allograft survival in uremic diabetic recipients. *Transplantation* 1982;34:319-25.
13. Kumar S, Merchant MR, Dyer P, et al. Increased mortality due to cardiovascular disease in type 1 diabetic patients transplanted for end-stage renal failure. *Diabet Med* 1994;11:987-91.
14. Rischen-Vos J, van der Woude FJ, Tegzess AM, et al. Increased morbidity and mortality in patients with diabetes mellitus after kidney transplantation as compared with non-diabetic patients. *Nephrol Dial Transplant* 1992;7:433-7.
15. Shaffer D, Simpson MA, Madras PN, et al. Kidney transplantation in diabetic patients using cyclosporine. Five-year follow-up. *Arch Surg* 1995;130:283-7.

Author's reply

Reply from authors is awaited.