

Long Term Outcomes of Highly Sensitized Kidney Transplant Recipients

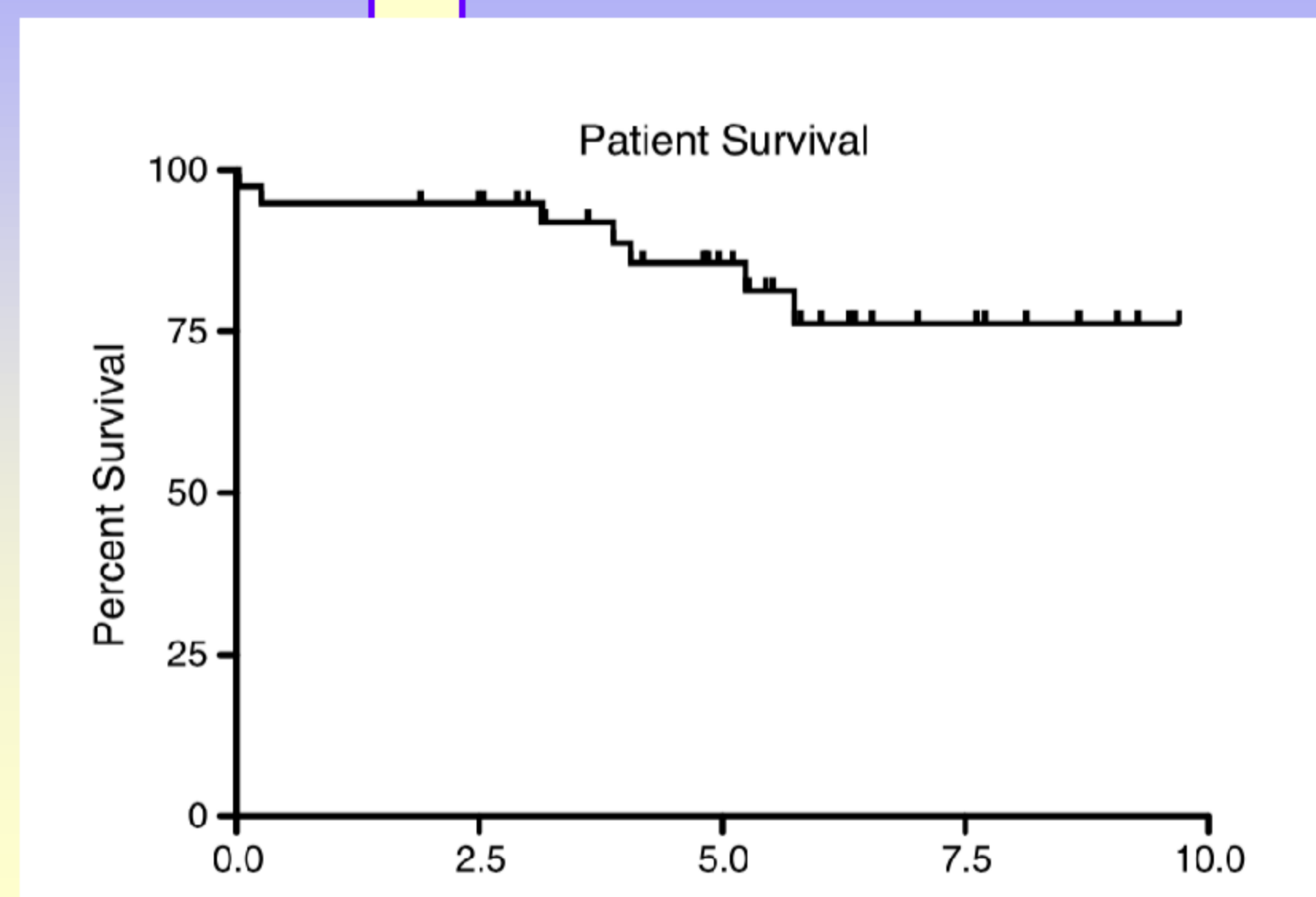
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OBJECTIVES

To follow the clinical outcomes of 45 highly sensitized patients who had undergone a desensitization protocol prior to kidney transplantation, and report the incidence of complications, allograft survival, and patient survival

METHODS

We conducted a retrospective review of 45 kidney transplant recipients transplanted between 9/2002 and 10/2011, who had a positive T or B cell complement dependent cytotoxic (CDC) crossmatch assay. B cell CDC crossmatches were confirmed with a solid-phase assay to determine presence of class II anti-HLA antibodies.



RESULTS

All subjects completed a desensitization protocol of plasmapheresis, intravenous immunoglobulin, +/- rituximab to render a negative T cell crossmatch or a negative or weak titer B cell crossmatch 24 hours prior to transplantation. Post-transplant all recipients received antibacterial and antiviral prophylaxis; allograft biopsies were performed when clinically indicated.

The mean and median follow-up was 5 years. Thirty-three subjects (73%) suffered acute rejection of the allograft, 30 (67%) occurred in the first year post-transplant, and 27 (60%) occurred in the first month post-transplant. There was 1 case of hyperacute rejection necessitating transplant nephrectomy. Twenty-nine of the 33 (88%) were cases of acute antibody mediated rejection. BK viremia occurred in 7 patients (15.5%), leading to graft loss in 3. There were 5 patients that suffered multiple pneumonias, 5 cases (11%) of bacteremia, 1 case of fungemia, and 4 patients (8.8%) with cytomegalovirus infection. There were no cases of lymphoproliferative disease, although 1 patient developed an aggressive cutaneous angiosarcoma and died. There was also one case of renal cell carcinoma, and 4 cases (9%) of skin malignancies. The 1, 3, and 5 year allograft survival was 87%, 76%, and 68% respectively. The 1, 3, and 5 year patient survival was 93%, 91%, and 84% respectively.

CONCLUSIONS

Patients with a positive CDC crossmatch that are transplanted after a plasmapheresis-based desensitization protocol have high rates of acute rejection and infectious complications. Despite increased rate of rejection and over-immunosuppression, patient and graft survival in the desensitized group is comparable to the 1, 3, 5 year survival (graft: 89%, 78%, 67% respectively; patient: 95%, 90%, 85% respectively) of recipients of repeat transplants from living donors.

References

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