LONG-TERM OUTCOME OF CADAVERIC KIDNEY TRANSPLANT IN HIGHLY SENSITIZED AFRICAN AMERICAN PATIENTS

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Background: About 16% patients on the kidney transplant waiting list are highly sensitized to human leukocyte antigens (HLAs), which is defined by panel reactive antibody (PRA) >80%. These patients usually have longer waiting time and poorer outcomes. AA ethnicity has been known as a risk factor for acute rejection and allograft loss. Long-term outcome of cadaveric kidney transplant in these highly sensitized AA patients remain unclear.

Method: We retrospectively compare the outcome of cadaveric kidney transplant in highly sensitized (peak PRA>80%) AA patients and non African American (NAA) patients from January 1998 to December 2007 in our transplant institute. Virtual crossmatch was used in the listing. Donor lymph node cells were used for crossmatch. All patients had negative T cell and B cell crossmatches at the time of transplant. Basiliximab was used as induction and tacrolimus, mycophenolic acid and steroids were used as maintenance therapy.

Results: Compared to NAA (n=53), AA (n=89) had longer waiting time (34.6±21.6 vs. 26.5±20.2 months, P=0.03); longer dialysis time (50.6±36.5 vs. 37.6±33.9 months, P=0.04) and numerically more HLA mismatch (4.2±1.8 vs. 3.9±1.7, NS). The incidences of delayed graft function, acute rejection, CMV infection and surgical complications were not statistically different. The graft function post transplant was also similar. There is no statistically difference in patient survival (93% vs. 96%, 86% vs.96% and 85% vs. 94%, P=0.17), graft survival (91% vs. 94%, 85% vs. 79% and 82% vs. 71%, P=0.08) and death-censored graft survival (94% vs. 98%, 92% vs. 83% and 89% vs. 78%, P=0.11) at 1, 3 and 5 year post transplant between AA group and NAA group.

Conclusion: Our study showed highly sensitized AA patients had significantly longer waiting time. With virtual crossmatch in the listing, accurate crossmatch enhanced by using donor lymph node cells and modern immunosuppressant, their long-term outcomes were not inferior to NAA and their graft survival was even compatible to the national overall cadaveric kidney transplants.