

Renal Transplantation Generally Successful in HIV-Infected Patients

HIV-infected patients had more episodes of graft rejection than other transplant recipients, but graft survival and patient survival rates were both in the usual range.

For decades, HIV infection was considered an absolute contraindication to organ transplantation, but not any longer: Many case reports have suggested that transplantation is feasible, and now a large prospective study confirms that kidney transplantation should be successful in most HIV-infected patients, despite some challenges unique to this population.

Between late 2003 and mid-2009, 150 HIV-infected patients underwent kidney transplantation at 19 U.S. centers, with most receiving a cadaveric kidney. All the patients were virologically suppressed on stable combination antiretroviral therapy, with a median CD4 count of 524 cells/mm³. About 25% had a history of AIDS-defining illness. Renal failure was ascribed to HIV-associated nephropathy in 24% of patients and to diabetes or hypertension in 34%. About 20% of patients had concomitant active hepatitis B or C virus infection. Some patients interrupted antiretrovirals during the operative period, but none did so for >3 weeks.

A median 1.7 years after transplantation, the cumulative incidence of rejection episodes (31% at 1 year; 41% at 3 years) was 2 to 3 times higher than the rate seen in a national registry of kidney transplant recipients. However, both 1-year and 3-year patient survival rates (95% and 88%, respectively) were in the acceptable range; that is, they were better than the rates seen in kidney-transplant recipients aged ≥ 65 but somewhat worse than those seen in all kidney-transplant recipients. Graft survival rates (90% at 1 year and 74% at 3 years) followed exactly the same pattern. Active hepatitis C virus infection did not affect graft or patient survival, although coinfecting patients did have a higher rate of serious infections.

CD4 counts fell precipitously in the first few months after transplant — by >200 cells/mm³ in patients who received antithymocyte globulin — and stabilized 3 years later at about 50 cells/mm³ below pretransplant levels. In the majority of patients, viral loads remained undetectable except for transient elevations. A handful of new opportunistic infections were diagnosed (2 cases of cutaneous Kaposi sarcoma and 1 each of presumed *Pneumocystis jirovecii* pneumonia, cryptosporidiosis, and candidal esophagitis); all were easily treated. Interestingly, biopsy-confirmed HIV-associated nephropathy developed in two patients despite undetectable viral loads.

Comment: This study is quietly revolutionary, confirming that HIV-infected patients are likely to do as well after renal transplantation as other patients. The high rejection rates

may reflect the difficulty of managing postoperative anti-rejection drug levels in the face of multiple pharmacokinetic interactions with antiretrovirals. An editorialist applauds the study's results but calls for similar revolutionary research into the early stages of HIV-related kidney disease, before transplant becomes necessary.

— **Abigail Zuger, MD**

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