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STUDY COMPARES STRATEGIES FOR BK VIRUS NEPHROPATHY *Aggressive Reduction of Immunosuppression Lowers Risk of Kidney Loss in Transplant Recipients*

Washington, DC (Wednesday, November 26, 2008) — For kidney transplant recipients with a serious complication called BK virus-associated nephropathy (BKVAN), promptly cutting back on anti-rejection drugs reduces the risk of losing the kidney (graft loss), according to a report in the November *Clinical Journal of the American Society of Nephrology* (CJASN).

"Our study is the first that demonstrates differences in outcomes when comparing two different immunosuppression tapering approaches in BKVAN, an increasingly prevalent, discouraging problem after kidney transplantation," comments Alexander C. Wiseman, MD, of the University of Colorado at Denver Health Sciences Center, one of the study authors.

The researchers compared the results of competing strategies for reducing immunosuppressive therapy in kidney transplant recipients with BKVAN. "Recognized slightly more than 10 years ago, BKVAN is caused by reactivation of a virus that exists latent in about 80 percent of all human kidneys," explains Dr. Wiseman. In healthy people, the BK virus is harmless.

However, in patients receiving immunosuppressive drugs to prevent rejection after kidney transplantation, the BK virus can become reactivated. "BKVAN occurs in two to 10 percent of kidney transplant recipients, routinely causing irreversible graft injury with a high frequency of graft loss," says Dr. Wiseman.

Of 910 patients receiving kidney transplants between 1999 and 2005, 3.8 percent developed BKVAN. Of these, 46 percent eventually lost the transplanted kidney. One group of patients was treated using a "withdrawal" strategy, in which the number of immunosuppressive drugs was cut back from three to two. Another group was treated by a "reduction" strategy, with a reduced dose of all three medications. The idea is that cutting back on anti-rejection drugs will allow the body's immune system to become strong enough to fight off the BK virus.

One year later, the transplanted kidney was still functioning in 88 percent of patients treated by the "withdrawal" strategy, compared to 56 percent with the "reduction" strategy. Early withdrawal of

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immunosuppressive drugs—within one month after the diagnosis of BKVAN—reduced the risk of graft loss by two-thirds.

Another treatment, called depleting antibody induction, was associated with a fourfold increase in the risk of graft loss. All of the treatment differences remained significant after adjustment for other factors.

Outcomes were much better when BKVAN was managed by specialists at the transplant center. For these patients, the risk of graft loss was eleven times lower than for patients managed by the patient's home nephrologist, in cooperation with the transplant center. This may have partially reflected the large number of patients from rural areas, drawn from five Western states, treated at the University of Colorado transplant center.

The results highlight the need for increased awareness and early diagnosis of BKVAN, with "aggressive tapering of immunosuppression" as soon as the diagnosis is made, according to Dr. Wiseman. "Our study also identifies a potential need for the general nephrology community to adopt screening strategies for BKVAN, and to understand the prevalence and severity of the disease outside the transplant center." Dr. Wiseman also notes some limitations of the study, including the fact that it was retrospective in nature and did not include a large percentage of black patients.

The article, entitled "Aggressive Immunosuppression Minimization Reduces Graft Loss Following Diagnosis of BK Virus-Associated Nephropathy: A Comparison of Two Reduction Strategies," appears online at <http://cjasn.asnjournals.org/> and in print in the November 2008 print issue of CJASN.

ASN is a not-for-profit organization of 11,000 physicians and scientists dedicated to the study of nephrology and committed to providing a forum for the promulgation of information regarding the latest research and clinical findings on kidney diseases. ASN publishes the JASN, the *Clinical Journal of the American Society of Nephrology* (CJASN), and the *Nephrology Self-Assessment Program* (NephSAP). In January 2009, the Society will launch *ASN Kidney News*, a newsmagazine for nephrologists, scientists, allied health professionals, and staff.

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