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## **Differential Effects of Desensitization Therapy on BK Virus Viremia after Living Donor Kidney Transplantation**

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**Introduction:** BKV is a major opportunistic infection in kidney transplant recipients. The clinical effects of desensitization therapy on BKV viremia is unclear.

**Methods:** We retrospectively analyzed 1356 adult living-donor kidney transplant recipients between 2006 and 2020 at our hospital. Patients were divided into four groups according to desensitization strategy. A comparison of BKV viremia incidence between groups was performed.

**Results:** Rituximab group had a 2.2-fold, and rituximab with low-dose IVIG group had a 1.9-fold higher risk of BKV viremia than control group. Rituximab with high-dose IVIG group had a similar risk of BKV viremia compared to control group. BKV viremia was independently associated with an increased risk of death-censored graft loss in multivariable analysis (HR 1.856, 95% CI 1.094-3.151 p = .022). Overall patient survival rates were comparable regardless of BKV viremia. Patients with BKV viremia showed inferior graft renal function compared to those without BKV viremia since 2 months prior to BKV viremia diagnosis.

**Conclusion:** Rituximab increases the risk of BKV viremia, whereas high-dose IVIG reduces the risk of BKV viremia.