Infectious diseases in the first year after kidney transplantation in Vietnamese: a single-center cohort study

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Background: Kidney recipients experience a high burden of infections throughout the first year post-transplantation, with opportunistic pathogens and predominance of viral and bacteria.

Methods: In this prospective study, all clinically relevant infections were identified by physicians in kidney transplant patients between December 2016 and June 2021 in 108 Military Central Hospital, Vietnam. The viral infections were identified by blood and urine samples. Among 87 kidney recipients, 71 patients with at least 12 months of follow-up were identified.

Results: Sixty-seven patients (94.4%) suffered viral and/or bacterial infections during the first year post-transplantation. Bacteria were responsible for 27 infections (38.0%) prevailing throughout the year, with 23.9% as urinary tract infection, 8.4% as respiratory pathogens, and 5.6% as digestive tract pathogens. Bacterial infections were highest in the first-month post-transplantation (22.5%). Among 67 viral infections, BK and JC polyomavirus (62.0 and 56.3%), cytomegalovirus (66.2%), Epstein-Barr virus (12.7%), herpes simplex virus (4.2%), and both B19 and hepatitis C (2.8%) in kidney transplant recipients. The prevalence of viral infection found via blood samples is lower than via urine samples (77.5% and 87.3%) over 12 months across all kidney recipients. The highest viral infection was found in the sixth month post-transplantation, 35.2% and 53.5% via blood and urine samples, respectively.

Conclusions: The burden of post-transplant infections is high in the current study. Multiple methods should be used to identify infectious diseases after kidney transplantation.

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