

Abstract Submission No. : 1077

Current status of cytomegalovirus prophylaxis and its clinical impact in kidney transplant recipients in Korea: the Korean organ transplantation registry study

Jin Sug Kim¹, Na Rae Lee², Hyeon Seok Hwang¹, Myoung Soo Kim³, Jaeseok Yang⁴, Min Jung Ko², Kyung Hwan Jeong¹

¹Department of Internal Medicine-Nephrology, Kyung Hee University School of Medicine, Korea, Republic of

²Department of National Evidence-based Healthcare Collaborating Agency, National Evidence-based Healthcare Collaborating Agency, Korea, Republic of

³Department of Surgery, Yonsei University College of Medicine, Korea, Republic of

⁴Department of Internal Medicine-Nephrology, Yonsei University College of Medicine, Korea, Republic of

Objectives: Cytomegalovirus (CMV) infection is a frequent and devastating complication after kidney transplantation (KT). To minimize the adverse effects of CMV on clinical outcomes, anti-viral prophylaxis is considered an essential treatment in KT recipients except for low-risk group of CMV infection. In this study, we investigated current status and clinical impact of CMV prophylaxis in KT recipients in Korea.

Methods: Data survey was conducted on 20 transplant centers which registered with the Korean Organ Transplantation Registry. 2,765 KT recipients were analyzed, excluding those who received prophylaxis less than 4 weeks and those with data missing. The study populations were divided into two groups according to receiving CMV prophylaxis, and the impact of prophylaxis on clinical outcomes including CMV infection, rejection, graft loss, and all-cause mortality were investigated.

Results: Of 2,765 patients, 481 (17.4%) received CMV prophylaxis, and the most common reason was routine protocol, followed by thymoglobulin usage. Mean duration of prophylaxis was 12.5 weeks, and ganciclovir was used in 189 (39.2%), valganciclovir in 84 (17.5%), and valacyclovir in 393 (81.7%) patients. Among patients who received prophylaxis, 81 (16.8%) experienced side effects, and hematologic complications including neutropenia, thrombocytopenia and anemia were the most common (n=62, 76.5%). Desensitization, thymoglobulin usage, and patients with high-risk of CMV infection were more frequently observed in prophylaxis group as compared to non-prophylaxis group. Non-prophylaxis group experienced more frequent CMV infection and rejection compared with prophylaxis group (28.7% vs. 18.2% and 21.7% vs. 12.21%, respectively). Prophylaxis group showed significant lower risk of CMV infection (HR 0.555, 95% CI 0.139–0.702) and rejection (HR 0.512, 95% CI 0.385–0.681).

Conclusions: Our results illustrate current status and clinical impact of CMV prophylaxis after KT in Korea. Considering the clinical impact of prophylaxis on clinical outcomes, the range of KT recipients receiving CMV prophylaxis should be expanded.