

Abstract Type : Oral Presentation
Abstract Submission No. : F-005089

Clinical effectiveness of live attenuated herpes zoster vaccine in kidney transplant recipients immunized prior to kidney transplantation: A retrospective single-center cohort study

Si-Ho Kim¹, Kyungmin Huh², Kyo Won Lee³, Jae Berm Park³, Woo Seong Huh⁴, Jae-Hoon Ko², Kyong Ran Peck²

¹Department of Infectious Diseases, Samsung Changwon Hospital, Republic of Korea

²Department of Infectious Diseases, Samsung Medical Center, Republic of Korea

³Department of Transplantation Surgery, Samsung Medical Center, Republic of Korea

⁴Department of Nephrology, Samsung Medical Center, Republic of Korea

Introduction: Kidney transplant recipients have an increased risk of herpes zoster (HZ) and its complications. Although live attenuated or recombinant subunit zoster vaccine has been recommended for candidates for kidney transplantation, there has been no clinical data of effectiveness for preventing HZ. In this study, we evaluated the clinical effectiveness of live attenuated herpes zoster vaccine in kidney transplant recipients immunized prior to kidney transplantation.

Methods: A retrospective single-center cohort study was conducted in Samsung Medical Center, a 1950-bed tertiary teaching hospital. Adult patients aged 18 years who received kidney transplantation from January 2015 through December 2018 were enrolled. Patients were observed until HZ event, death, loss to follow-up, or 5 years after transplantation. The inverse probability of treatment weighted Cox proportional hazard model was used to compare the incidence of HZ after transplantation to mitigate the effect of baseline imbalance.

Results: A total of 84 vaccinated and 340 unvaccinated patients were enrolled. Vaccinees were immunized a median of 121 days before transplantation. The median age was older in the vaccinated group than in the unvaccinated group (57 vs. 54 years, $P < 0.001$). Grafts from deceased donors were more frequently transplanted in the unvaccinated group (16.7% vs. 51.8%, $P < 0.001$). Five-year cumulative HZ incidence was 11.9%, and the incidences of the vaccinated and unvaccinated groups were 3.9% and 13.7%, respectively. After adjustment, vaccination showed a significant protective effectiveness against HZ (adjusted hazard ratio 0.18, 95% confidential interval 0.050.60). In addition, no disseminated zoster was observed in the vaccinated group, whereas 4 cases were observed in the unvaccinated group.

Conclusion: Our study, which was the first study on the clinical effectiveness of zoster vaccination for kidney transplantation recipients, suggested that a live attenuated herpes zoster vaccination before transplantation effectively prevents HZ in kidney transplant recipients.