



Abstract Type : Poster exhibition

Abstract Submission No.: A-0538

Abstract Topic : Transplantation

Prognostic Impact of Changes in High-Density Lipoprotein Cholesterol After Kidney Transplantation: A Nationwide Prospective Cohort Study

Jeong-Hoon Lim¹, You Hyun Jeon², Sik Lee³, Yeon Ho Park⁴, Su Hyung Lee⁵, Jaeseok Yang⁶, Myoung Soo Kim⁷, Chan-Duck Kim², Jang-Hee Cho²

¹Department of Internal Medicine-Nephrology, Kyungpook National University Medical Center, Korea, Republic of

²Department of Internal Medicine-Nephrology, Kyungpook National University Hospital, Korea, Republic of

³Department of Internal Medicine-Nephrology, Chonbuk National University Hospital, Korea, Republic of

⁴Department of Surgery-Transplantation, Gachon University Gil Medical Center, Korea, Republic of

⁵Department of Surgery-Transplantation, Ajou University Hospital, Korea, Republic of

⁶Department of Internal Medicine-Nephrology, Yonsei University College of Medicine, Korea, Republic of

⁷Department of Surgery-Transplantation, Severance Hospital, Korea, Republic of

Objectives : High-density lipoprotein cholesterol (HDL-C) is inversely associated with cardiovascular diseases and mortality in the general population. In patients with kidney disease, low levels of HDL-C have also been associated with disease progression. This study evaluated the impact of HDL-C changes during the early post-transplant period on clinical outcomes in kidney transplant recipients (KTRs).

Methods : We analyzed 4,496 KTRs from a prospective nationwide cohort in Korea. Patients were classified into four groups based on HDL-C levels measured before transplantation and 6 months after kidney transplantation (KT): low to low, low to normal, normal to low, and normal to normal. The primary outcome was a composite of cardiovascular events and graft failure.

Results : The composite outcome occurred in 7.5% (33/4,496) of KTRs, with the persistent normal HDL-C group exhibiting a significantly lower incidence than the other three groups. Pre-transplant low HDL-C levels (both the low to low and low to normal groups) were associated with a higher incidence of cardiovascular events compared to the persistent normal HDL-C group. Persistent low HDL-C levels and a decline from normal to low HDL-C levels showed an increased risk of the composite outcome compared to persistent normal HDL-C levels (adjusted hazard ratio [aHR], 1.51, 95% confidence interval [CI], 1.09–2.09, P=0.014; aHR, 1.87, 95% CI, 1.16–3.00, P=0.010, respectively) (Figure 1). Furthermore, persistent low HDL-C levels increased the risk of cardiovascular events, and a decline from normal to low HDL-C levels was associated with a higher risk of graft failure than persistent normal HDL-C levels.

Conclusions : Persistently low levels of HDL-C and a decline in HDL-C after KT were associated with an increased risk of composite outcomes, including cardiovascular events and graft failure. Specifically, persistently low HDL-C levels elevated the risk of cardiovascular events, while a decrease from normal to low HDL-C was associated with a higher risk of graft failure.



Figure 1.jpg

