KSN SEOUL, KOREA 2023
April 27(Thu) - 30(Sun), 2023
Coex, Seoul, Korea

Abstract Type : Oral
Abstract Submission No. : 1115

Early Outcomes of Tocilizumab (Anti-IL-6R Monoclonal) Treatment for Chronic Active Antibody-Mediated Rejection in Kidney Transplant Recipients

Haeun Lee, Hanbi Lee, Hyung Duk Kim, Chul Woo Yang, Byung Ha Chung
Department of Internal Medicine-Nephrology, The Catholic University of Korea, Seoul St. Mary's Hospital, Korea, Republic of

Objectives: Chronic active antibody-mediated rejection (cABMR) is a leading cause of kidney allograft failure. Anti-humoral therapies such as plasma exchange, intravenous immunoglobulins (IVIG), and rituximab failed to show effectiveness on cABMR. Tocilizumab (TCZ), a humanized anti-Interleukin-6 (IL-6) receptor monoclonal antibody, may be a potential treatment option for cABMR by regulating inflammation and alloantibody production.

Methods: Thirteen kidney transplant (KT) recipients received TCZ treatment for cABMR in Seoul St. Mary's Hospital between 2019 and 2022. TCZ was administered at a monthly dose of 8mg/kg (maximum 800mg) for up to 6 months. If a patient's Immunoglobulin G level is ≤ 600mg/L, they were given a dose of 0.5mg/kg IVIG before receiving TCZ. Mean follow-up period was 10.0 months.

Results: Five out of thirteen patients had donor specific anti-HLA antibodies (HLA-DSA) at the time of biopsy. The mean fluorescence intensity (MFI) values of HLA-DSA were decreased after TCZ treatment in 3 patients. One patient experienced graft failure after 1 session of TCZ and showed an increase in HLA-DSA MFI. One patient undergoing treatment needs monitoring of HLA-DSA MFI (**Fig. 1A**). Five patients experienced death-censored graft failure. Patients with graft failure more frequently had a history of antibody-mediated rejection, a lower estimated glomerular filtration rate (eGFR), and a higher levels of proteinuria, although this difference was not statistically significant. One patient was diagnosed with pneumonia. No patient deaths were reported. (**Table 1**). In patients without graft failure, eGFR stabilized after starting TCZ with ΔeGFR of 13.0 mL/min/1.73m^2 (6 months pre-treatment) to 0.4 mL/min/1.73m^2 (6 months post-treatment) (**Fig. 1B**) and the amount of proteinuria reduced (**Fig. 1C**).

Conclusions: Even though patients with far advanced cABMR suffered allograft failure during treatment, patients without graft failure showed a decrease in HLA-DSA MFI and stabilization of allograft function. Our study suggests that early application of TCZ can give benefit for cABMR patients.

Figure 1