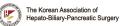


HBP SURGERY WEEK 2023

MARCH 23 THU - 25 SAT, 2023 | BEXCO, BUSAN, KOREA www.khbps.org

& The 58th Annual Congress of the Korean Association of HBP Surgery



ABST-0417

The Effect Of Donor Dominant One-way HLA Mismatch On Liver Transplantation Outcomes: An Analysis Of Korean Organ Transplantation Registry (KOTRY) Database

Sunghae PARK, Jinsoo RHU*

Surgery, Samsung Medical Center, REPUBLIC OF KOREA

Background : Human leukocyte antigen (HLA) compatibility, especially donor dominant one-way HLA mismatch ($D \rightarrow R$ one-way HLA MM) seemed strongly associated with graft-versus-host disease (GVHD).

The aim of this study is to investigate the relevance of $D \rightarrow R$ one-way HLA MM in outcome of liver transplantation by analyzing Korean Organ Transplantation Registry (KOTRY) database.

Methods : We retrospectively analyzed 2670 patients with HLA type data who underwent LT between April 2014 and December 2020 in KOTRY database. The patients were categorized into two groups whether $D \rightarrow R$ one-way HLA MM at 3 loci or not and evaluated the outcomes of LT between the two groups.

Results : Among 2670 LT recipients, 18 patients were found to be D \rightarrow R one-way HLA MM. In D \rightarrow R one-way HLA MM group, a higher proportion of donors were offspring of recipients compared to the control group (47.7% vs 83.3%, p = 0.002). The incidence of GVHD (0.3% vs 22.2%, p <0.001) and mortality rate (11.6% vs 38.9%, p = 0.003) was much higher in D \rightarrow R one-way HLA MM group compared to the control group. Logistic regression analysis showed that D \rightarrow R one-way HLA MM at 3 loci was seemed to be strongly associated with the incidence of GVHD (OR=163.3, p <0.001, multivariate). According to Cox regression multivariate analysis, D \rightarrow R one-way HLA MM at 3 loci (HR=12.75, p <0.001) was found to be the strongest risk factor for patient death. Patients with D \rightarrow R one-way HLA MM at 3 loci showed significantly lower overall survival (p <0.001) but there were no significant differences in rejection-free survival and death-censored graft survival between the two groups.

Conclusions : $D \rightarrow R$ one-way HLA MM at 3 loci not only affects the overall survival of LT patients but also the incidence of GVHD.

Corresponding Author : Jinsoo RHU (jsrrules@gmail.com)