Outcome of ABO-incompatible kidney transplantation depending on the ABO type of transfused plasma: comparative analysis between the universal AB plasma and donor type plasma

Han Joo Kim¹, Jin Seok Kim¹, John Jeongseok Yang¹, Yousun Chung², Hyungsuk Kim³, Sung Shin⁴, Young Hoon Kim⁴, Sang-Hyun Hwang¹, Heung-Bum Oh¹, Dae-Hyun Ko¹

¹Department of Laboratory Medicine, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea

²Department of Laboratory Medicine, Kangdong Sacred Heart Hospital, Seoul, Korea

³Department of Laboratory Medicine, Seoul National University Hospital, Seoul, Korea

⁴Division of Transplantation, Department of Surgery, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea

Background: Since the remarkable development of various desensitization methods and immunosuppressive agents, the outcome of ABO-incompatible solid organ transplantation has greatly improved. However, there is no evidence-based consensus about how to determine the blood type of blood products for transfusion to recipients of ABO-incompatible solid organ transplantation, and each institution has its own principles.

Methods: We retrospectively analyzed the data of 60 ABO-incompatible kidney transplantation recipients between August 2009 and June 2013. All recipients had blood type O, and their donors' blood type was A or B. Patients' demographics and clinical status were compared between the two recipient groups; one group received AB plasma despite the donor's blood type (n=30), and the other group received plasma that matched the donor's blood type (n=30).

Results: The demographics of the two groups did not show statistically significant differences. Both rejection-free survival and rejection rate graphs seemed favorable in the group that received donor type plasma, but no statistically significant difference was observed. Other parameters did not show significant differences.

Conclusions: We suggest a strategy for transfusion in ABO-incompatible solid organ transplantation. This strategy can improve transfusion safety and the efficient use of blood products.

Corresponding author: Dae-Hyun Ko

E-mail: daehyuni1118@amc.seoul.kr

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