

## ABO 부적합 신장이식

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### ABO Blood Group Incompatible Renal Transplantation Preconditioned with Rituximab and Plasmapheresis with no Splenectomy

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Serious organ shortage necessitates ABO incompatible renal transplantation. Recent reports utilizing rituximab instead of splenectomy and tacrolimus (FK) based triple immunosuppressants showed excellent graft outcome. Four cases of living donor ABO incompatible kidney transplantation have been performed since Feb. 2007 in our center. Median age of recipients was 35 (33- 38). Relation was 3 living related (1 HLA- identical, 1 haploidentical and 1 non- identical) and 1 unrelated (4 HLA MM). Donor and recipient blood group was A to B (n=1), B to A (1), A to O (1) and B to O (1). Rituximab was given 2 to 4 weeks prior to transplantation. Plasmapheresis of 1 plasma volume was initiated at 10days before transplantation with concurrent FK based triple immunosuppressants. A total of 6 (4- 8) sessions of plasmapheresis were performed before transplantation, and in one case with high initial antibody titer of 512, four additional sessions of posttransplant plasmapheresis were also performed. Median IgG anti- ABO antibody titer before precondition, at transplantation, at 1 and 2 weeks post- graft was 64 (32- 512), 1 (1- 8), 1 (1- 8) and 2 (1- 8), respectively. IgM titer at corresponding time point was 16 (8- 32). 1 (1- 8), 1 (1- 8) and 1 (1- 8), respectively. No acute humoral or cellular rejection developed. Graft function remained stable to date. No patient lost. We conclude that ABO incompatible renal transplantation can be safely performed with the use of current preconditioning and immunosuppressive regimen. As ABO- incompatible grafts that survived initial few weeks can enjoy long term graft function due to accommodation, which is in contrast to crossmatch- positive graft with poorer long term outcome, we believe ABO incompatible transplantation is a valuable option for expanding donor pool and should be actively performed in Korea.

**Key Words :** 혈액형 부적합, 신장이식, Rituximab

ABO incompatible, Kidney transplantation, Rituximab