Successful renal transplantation in simultaneous positive crossmatch and ABO incompatible living donor

Ji Ae Yang, Hyun Lee Kim, Jong Hoon Chung, Byung Chul Shin
Department of Internal Medicine-Nephrology, Chosun University Hospital, Korea, Republic of

Case Study: ABO incompatibility and positive crossmatch remain the two largest barriers to optimal utilization of kidneys from live donors. Here we describe the successful transplantation of patients who were both ABO incompatible and crossmatch positive with their only available donor. A preconditioning regimen of plasmapheresis (PP), rituximab (RTX) and intravenous immunoglobulin (IVIg) were delivered until donor-specific antibody (DSA) titers were reduced to a safe level and isoagglutinin titers. The patient is a 43-year-old woman with chronic kidney disease due to chronic glomerulonephritis. The patient had positive crossmatch (T-cell cytotoxicity titer 1:2), PRA titer (class I 64%, MFI max 11725 and class II 63%, MFI max 3644) and blood group O (anti-A titer 1:32) with her son. After desensitization therapy, negative crossmatch, low PRA titer (class I 29%, MFI max 4681 and class II 40%, MFI max 1018) and blood group O (anti-A titer 1:2 below). She received tacrolimus, MMF, corticosteroid and CMV prophylaxis protocols. There was no acute rejection or infection. The patients are more than 11 months post-transplant with excellent graft function. Patients who have a positive crossmatch and ABO incompatibility with their living donor can be successfully transplanted after a desensitization regimen followed by standard immunosuppressive drugs.