

신장이식환자에서 만성 항체매개성 거부반응의 치료경험

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Outcomes of Combination Therapy for Chronic Antibody-mediated Rejection in Renal Transplantation

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Introduction: Chronic antibody-mediated rejection (CAMR) in renal transplant patients has poor allograft outcomes; however, treatment strategy has not been established yet. Herein, we present short-term outcomes of combination therapy for CAMR.

Methods: Nine renal transplant patients have been diagnosed as CAMR from 2005 to 2011. We used 3 different treatment regimens for CAMR. (1) high dose intravenous immunoglobulin (IVIg, 2 g/kg) and rituximab (200 mg), (2) high dose IVIg, rituximab and bortezomib (1.3 mg/m²×4), (3) plasmapheresis with low dose IVIg (0.1–0.2 g/kg), rituximab and bortezomib. Steroid pulse therapy was also administered, when acute T cell-mediated rejection was combined with CAMR.

Results: Six patients had CAMR and 3 patients had "suspicious CAMR", because DSA was not demonstrated in 3 patients. All patients that had DSA, showed anti-HLA DR, and three of them showed both class I and II DSA. Transplant glomerulopathy was severe in 7 patients while it was mild in 2 patients. Borderline or acute T cell-mediated rejection was combined in 4 patients. The median diagnosis time of CAMR was 120.2 months after transplantation (range 47–228 months). Proteinuria more than 1 g/day was detected in 7 patients and estimated glomerular filtration rate (eGFR) decreased in all patients during 6 months before treatment (average loss, 22.96±16.82%). Despite CAMR treatment, 3 patients showed further deterioration of eGFR and two of them started dialysis due to graft failure. However, graft function improved or stabilized in 6 patients (62.5%). Especially, anti HLA antibodies were more effectively removed and renal graft functions improved in patients who received multiple plasmapheresis/low dose IVIg, rituximab and bortezomib. In addition, proteinuria was not substantially increased in almost all patients after treatment during study period. Infectious complications such as pneumocystis carinii pneumonia and herpes zoster occurred and were successfully treated in 2 patients.

Conclusion: Combination therapy of rituximab, intravenous Immunoglobulin (IVIg), bortezomib and plasmapheresis might be effective even in patients with relatively late stage of CAMR.

Key Words: 신장이식, 만성 항체매개성 거부반응

Lidney transplantation, Chronic antibody mediated rejection