

고감작된 신장이식 환자들에서 Rituximab 사용의 효과

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Effect of Pre-transplant use of Rituximab on Post-transplant Clinical Outcome in Highly Sensitized Patients

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Background: Pre-transplant sensitization is important risk factor for the development of antibody-mediated rejection and can result in inferior long-term allograft survival in kidney transplantation (KT). The aim of this study is to investigate the effect of pre-transplant rituximab infusion on the clinical outcome in highly sensitized patients.

Methods: Between Jan. 2002 and Aug. 2013, 52 patients showed the result of panel-reactive antibody (PRA) higher than 50%, but showed negative crossmatch test before transplantation. Out of them, 32 patients who took pre-transplant rituximab at a dose of 375 mg/m² belonged to Rituximab group and remained 20 patients were regarded as historic control group. We compared the development of acute rejection, the change of allograft function and allograft survival rate between 2 groups after KT.

Result: Between two groups, no difference was found in baseline characteristics such as age at KT, gender, pre-transplant dialysis duration, primary renal disease. The mean value of PRA and HLA mismatching number, the type of main immunosuppressive agent did not differ as well. Deceased donor turned out to be higher in RF group (12/20 (60%) vs. 6/32 (18.8%); p<0.02). After KT, the development of antibody mediated rejection was significantly lower in rituximab group (3/32 (9.4%)) compared to historic control group (8/20 (40%, p<0.009) and total rejection rate showed lower tendency in rituximab group as well. (6/20 (30%) vs. 3/32 (9.4%); p=0.056). However, development of pooled infection and infection free survival rate did not differ between 2 groups. Allograft function assessed by MDRD eGFR at 14 days after KT was significantly higher in rituximab group compared to historic control group, but at 1,3,6,and 12 months from KT, it did not differ between two groups. Allograft rejection free survival within 15.77±6.91 months was significantly higher in rituximab group compared to historic control group.

Conclusions: In sensitized patients with high PRA but negative crossmatch, rituximab was effective to prevent the development of antibody mediated rejection without increased risk for infection.

Key Words: 리투시맙, 고감작, 신장이식

Rituximab, Highly sensitized patients, KT