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생체 신장이식에서 Luminex 단일항원 검사를 이용하여 측정된 공여자 특이 항체 기저값의 임상적 의미

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Clinical Impact of the Baseline Donor-Specific anti-HLA Antibody Measured by Luminex Single Antigen Assay in Living Donor Kidney Transplantation

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In this study, we aimed to investigate the clinical impact of donor-specific anti-HLA-antibody (HLA-DSA) baseline levels, measured using the Luminex single-antigen assay (LSA), in living-donor kidney-transplantation (LDKT). Total 129 cases of LDKT were included and they were divided into 4 groups according to baseline mean fluorescence intensity (MFI) HLA-DSA values: Strong, >10,000; Moderate, 5000-10,000; Weak, 1000-5000, Negative, <1000. Pre-transplant desensitization (DSZ) was performed to decrease the MFI to weak or negative values. Clinical outcomes in the 4 groups were compared. Crossmatch (XM) results, by either complement-dependent cytotoxicity or flow cytometry, were more likely to be positive in the moderate and strong groups than in the weak group. After DSZ, HLA-DSA decreased to weak or negative levels in all patients; the resultant MFI value did not differ between the 3 previously sensitized groups. Acute antibody-mediated rejection (AAMR) developed almost exclusively in strong group; allograft function in this group showed significant deterioration during follow-up compared to the other groups. Strong HLA-DSA levels at baseline were more predictive of AAMR than either type of XM. In conclusion, strong HLA-DSA levels at baseline are associated with worse allograft outcome; therefore, strict monitoring and strong maintenance immunosuppression may be required in such patients.

Key Words: 교차반응, 공여자특이항체, 탈감작
Crossmatch, Donor specific anti-HLA antibody, Desensitization