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B세포 교차반응 양성인 신장이식 환자의 임상적 특징 및 장기 예후

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Clinical Characteristics and Long-term Prognosis of Renal Transplantation across the Positivie B-cell Crossmatch

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Background/Aims : Complement-dependent cytotoxicity crossmatching (CDC) is the traditional cell-based method to detect anti-donor antibodies. However, clinical relavance and long-term progress after transplantation with positivity for B-CDC remain unclear.

Methods: We reviewed 622 renal transplantations with negative T-CDC from January 1995 to August 2008. All grafts were transplanted following negative T-cell flow cytoemtric crossmatching (T-FCXM) by desensitization protocol. We compared 20 recipients with positive B-CDC to 602 recipients with negative B-CDC.

Results: The two groups were similar for age, number of deceased donor, and degree of HLA mismatching. However, retransplant recipients, living unrelated donors and positivity for T- and B-FCXM were more frequent in B-CDC positive group. Positive B-CDC group showed worse graft survival than negative B-CDC group (p=0.0054). Rejection-free survival of positive B-CDC group was also poorer than negative B-CDC (p=0.0096), and they showed higher incidence of rejection episodes (p=0.018). When we compared characteristics of acute rejection episodes in both groups, positive B-CDC group showed higher peak creatinine during rejeciton (p=0.000), more resistant to steroid (p=0.000), more freqeunt graft loss by acute rejection (p=0.005), and worse post-rejection graft survival (p=0.0292) than negative B-CDC group. In the multivariate analysis for allograft survival, there were 1.191-fold increases per one HLA mismatch in the odds of graft failure (p=0.027), 2.469-fold increases per one rejection episode (P=0.000), and 2.469-fold increases with CDC-B positivity (p=0.048).

Conclusion: Kidney transplant recipients with isolated CDC-B positivity are associated with impaired long-term graft survival and severe acute rejection, suggesting independent risk factor for graft failure.

Key Words : B세포 교차반응 양성, 임상적 특징, 신장이식
B-cell CDC, Clinical characteristics, Kidney transplantation