KSN 2016 Abstract Submission

Transplantation & Immunology

KSN2016ABS-1507

Immunosuppressant treatment pattern of kidney transplantation recipients in Korea

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Background: Variety of immunosuppressive agent can make the transplant physician to plan individualized immunosuppression (IS) regimen. But there is no clear guideline on which parameters to consider appropriately according to their relative importance.

Methods: We evaluated the prescribed and changed IS pattern within 1 year after kidney transplantation (KT) in Korea. Total 636 KT recipients who were transplanted in 2012 and followed up for one year were enrolled and reviewed retrospectively.

Results: Basiliximab was most commonly used induction therapy, and anti-thymocyte globulin was used more frequently in deceased donor, sensitized (defined as panel reactive antibody > 50% or positive for crossmatch test) and ABO incompatible recipients. Firstly treated maintenance IS regimen was varied remarkably, the type of combinations was fifteen. Most common pattern of IS was triple therapy comprising of tacrolimus with mycophenolic acid and steroid (63.8%). ABO incompatible or sensitized patients took more frequently tacrolimus based IS than cyclosporine based IS. None of the elderly (> 65 years old) or children (< 19 years old) did take cyclosporine based regimen. Presence of diabetes or donor type (deceased vs. living) did not affect the main IS. IS change occurred mostly within 3 month after KT (80.5%). Most common cause of IS change was infection (10.9%), followed by gastrointestinal trouble (9.4%) and rejection (3.7%). CMV (26.3%) and BKV (22.8%) was the common cause of IS change due to infection. IS change because of gastrointestinal trouble occurred only first 3 months and it was the most common cause of IS change during this period. Sensitization and higher degree of HLA mismatch affected independently to the IS change in multivariate regression analysis.

Conclusion: Based on these findings, more tailored and suitable IS treatment for KT recipients will be adopted in the future.

Keywords: Immunosuppressive therapy, kidney transplantation