KSN SEOUL, KOREA 2023
April 27(Thu) - 30(Sun), 2023
Coex, Seoul, Korea

Abstract Type : Oral
Abstract Submission No. : 1792

Outcomes of Spousal Donor Kidney Transplantation regarding Donor-Recipient Sex Mismatch

Seunghyeok Choi, Hanbi Lee, Hyung Duk Kim, Eun Jeong Ko, Chul Woo Yang, Byung Ha Chung
Department of Internal Medicine-Nephrology, The Catholic University of Korea, Seoul St. Mary's Hospital, Korea, Republic of

Objectives: Though the number of patients who waits for kidney transplantation (KT) is growing with the increase of end-stage kidney disease (ESKD) patients, the shortage of kidney donor is still a crucial issue. With the predominance of nuclear family in modern society, spousal donor became one of the important donor source for living donor kidney transplantation (LDKT). Since patients' sex is the biological characteristic that has genetic, anatomic and endocrine traits, donor-recipient sex mismatch may have an impact on graft survival and function. In addition, female recipients are exposed to donor HLA antigen through gravidity, which enhances the immunological risk. We planned to investigate the outcomes of spousal donor kidney transplantation according to donor-recipient sex mismatch.

Methods: We analyzed the 456 SDKT recipients from 1986 to 2022 in Seoul St. Mary's hospital. We categorized the recipients by immunological risk allocated by Panel Reactive Antibody. Among the 367-standard risk SDKT recipients, husband-to-wife (H2W) SDKT recipients were 75 and wife-to-husband (W2H) SDKT recipients were 292. In the 89-high risk SDKT recipients, H2W SDKT recipients were 55 and W2H SDKT recipients were 34. Graft survival and allograft rejection was analyzed by donor-recipient sex mismatch.

Results: Long-term graft survival or incidence of acute rejection with 1-year after KT was comparable in standard risk recipients. Though long-term graft survival was comparable in both groups in high risk recipients, acute rejection within 1-year after KT showed higher incidence in H2W SDKT recipients, which was almost acute antibody-mediated rejection (AAMR).

Conclusions: Our results suggest that donor-recipient sex mismatch does not affect graft survival. Nonetheless, among the high risk SDKT recipients, H2W SDKT recipients showed higher risk of acute AAMR compared to W2H SDKT recipients, who have parallel immunological risk. H2W SDKT recipients with high immunological risk should be carefully managed by individualized desensitization protocol and immunosuppressant to reduce AAMR after KT.