

신장공여자의 나이가 생체신이식 성적에 미치는 영향 : Propensity score matching 분석을 이용한 다기관 연구

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Impact of Donor Age on Longterm Outcomes in Living Donor Kidney Transplants: A Propensity Score Matched Analysis using Multicenter Cohort

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Background: Recently, kidney transplantation from elderly living donor has been increasing. However, the impact of donor age on outcomes in kidney transplantation recipients has not been well established in Asian.

Methods: This multicenter cohort study included 2,595 adult kidney transplant recipients admitted to 5 major tertiary hospitals in Korea between 1997 and 2012. Patient survival, allograft survival, and biopsy-proven acute rejection (BPAR) were compared between the elderly donors (≥ 50 years) and young donors (18-49 years) by the propensity score matched (PSM) analysis.

Results: The proportion of donor with over 50 years was 21.2% (N=553). The mean age in the elderly donor was 54.9 ± 4.3 years old. Despite of difference of donor age, mean recipient age was similar between the groups. Elderly donors were more likely to donate to unrelated recipients. The proportions of recipients with diabetes mellitus (22.8%), serum creatinine and BMI of donor were significantly higher in the elderly donor group than in the young donor-age group. In elderly donor group, recipients' patient survival was worse than younger age group before PSM ($p=0.014$). After PSM, donor age did not affect the recipient's survival ($p=0.305$) and allograft survival ($p=0.077$), however, BPAR was frequently occurred in the allograft from elderly donor ($p=0.019$). In the multivariate Cox regression analysis, elderly donor affected the BPAR-free survival ($p=0.01$, hazard ratio 1.52, 95% confidence interval 1.07-2.17).

Conclusion: Kidney transplantation from elderly donor needs more meticulous management, because donor age could affect acute rejection.

Key Words: 공여자 나이, 이식신생존율, 급성거부반응
Donor age, Graft survival, Acute rejection