

Introduction

Kidney transplantation is the treatment of choice for selected patients with end-stage renal disease (ESRD)¹. Compared to patients on the waiting list, a successful kidney transplant improves life expectancy and quality of life²⁻⁶. Pre-transplant counseling of individual patients, however, remains a challenge to both nephrologists and transplant physicians. This study with one affiliated dialysis center and transplant center evaluated comorbid conditions before transplantation and the impact on patient and kidney graft survival.

Conclusions

This study showed excellent patient and graft survival. Next to age, gender, type of original disease and return to dialysis, a CCI-score ≥ 4 was independently associated with patient survival after kidney transplantation. In particular, comorbidity with peripheral vascular disease significantly influenced both patient and graft outcome, suggesting that pre-transplant work-up should include a comprehensive evaluation of peripheral vascular disease.

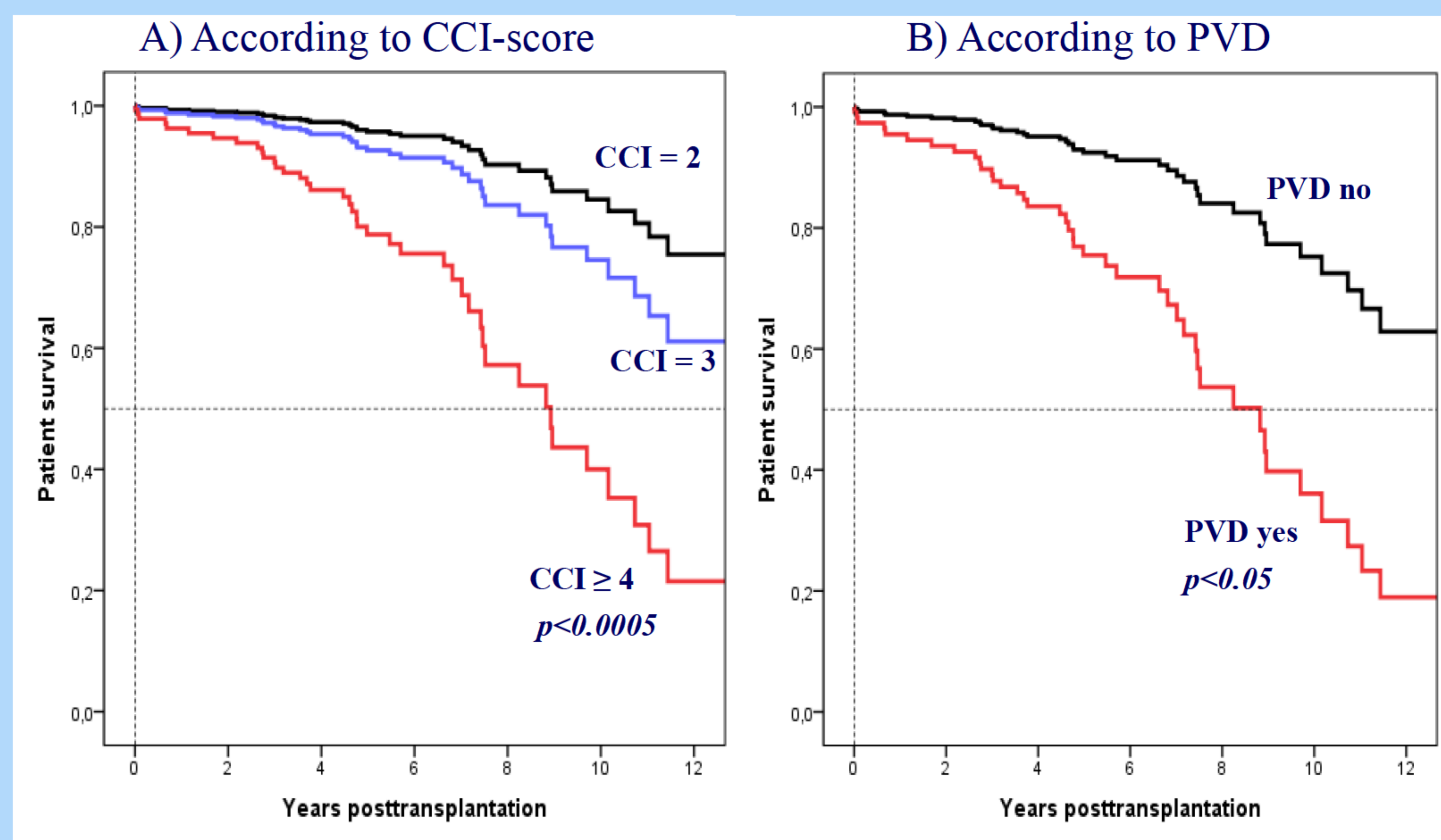
Methods

This single-centre retrospective study included all 172 patients from our hospital who received a first kidney transplant in the Leiden University Medical Center between January 1, 1995 and January 1, 2010. Demographic and pre-transplant patient characteristics were retrieved from patient files and/or RENINE and NOTR databases. Baseline co-morbidity at the time of transplantation was analyzed using de Charlson Comorbidity Index score (CCI-score).

Results

From 172 included transplant recipients, 99 received a kidney from a deceased and 73 from a living (un)related donor. Kaplan-Meier patient survival estimates after 1, 5 and 10 years were 97 ± 1 ; 86 ± 3 and $68 \pm 5\%$, respectively. Death-censored graft survival was $97,7 \pm 1,2$, $94,4 \pm 1,8$ and $93,4 \pm 2,1\%$. Overall mortality during follow-up was 25.6%. In the multivariable analysis recipient age, gender, type of original kidney disease, graft loss and CCI-score ≥ 4 were independently associated with patient survival. Adjusted patient survival according to CCI-score is plotted in Figure-1A. Using individual CCI-parameters, peripheral vascular disease (PVD) was a dominant risk factor. Adjusted survival according to the presence of PVD is plotted in Figure-1B. PVD had a strong association with worse patient survival (HR 3.58; 95%CI 1.2-11.2, $p < 0.05$). Patients with PVD lived significantly shorter (4.8 yrs, 95%CI 2.8-6.9 versus 13.2 yrs, 95%CI 11.9-14.4; $p < 0.0001$). PVD was also associated with inferior death-censored graft survival (HR 8.5; 95% 1.7-42.8; $p < 0.01$).

Figure-1: Adjusted patient survival



References

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