CP-143

THE CHANGE IN USE OF CALCINEURIN INHIBITORS IN KIDNEY TRANSPLANT RECIPIENTS AND ITS EFFECT ON SHORT TERM GRAFT AND PATIENT OUTCOMES

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Objectives

Calcineurin inhibitors (CNI) are essential components of maintenance immunosuppresion in patients after kidney transplantation. According to current clinical recommendations (1,2) the choice of initial calcineurin inhibitor (CNI) has changed during the last decade in our centre. Tacrolimus (TAC) replaced cyclosporine A (CsA) and has become the preffered initial CNI in kidney transplant recipients (graf 1). The aim of present study was to evaluate the impact of initial CNI on short term graft outcomes.

Methods

320 patients transplanted in 2008-2013 period were included in the retrospective analysis. Tacrolimus (TAC) as initial CNI was administered in 171 patients and cyclosporine A (CsA) in 149 patients. Characteristics of study subgroups are summarized in table 1. CNI were combined with corticosteroids and mycophenolate mophetil or mycophenolic acid in all patients.

Graf 1 Percentage of kidney transplant recipients using tacrolimus and cyclosporine A as initial CNI in the period 2004 - 2014

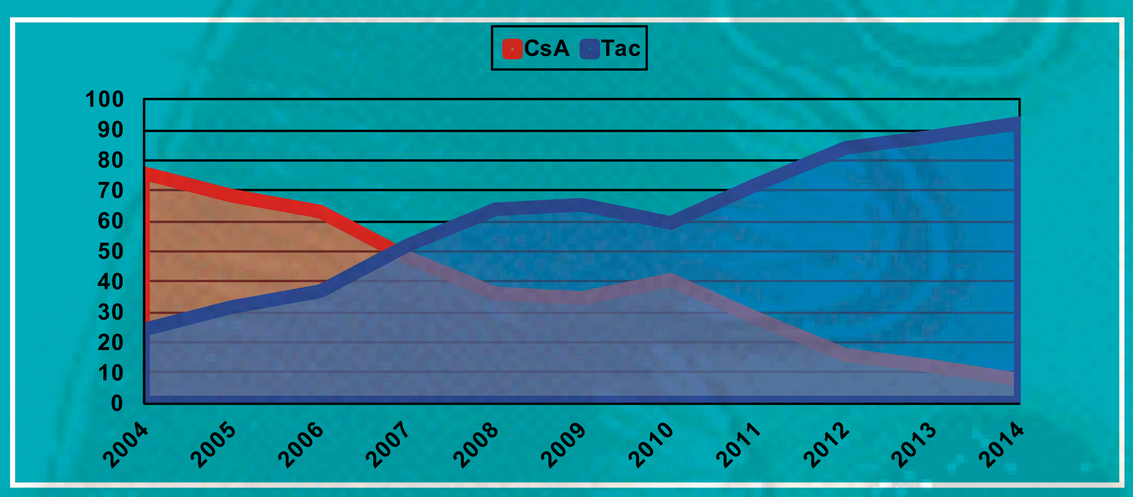

Table 1 Baseline characteristics of study group

	TAC group n = 171	CsA group n = 149	p value
male / female (%)	56 / 44	68 / 32	
mean age (years)	47	52	0.001
mean follow up (weeks)	201.7	186.8	ns
early acute rejection (% of patients)	54.6	45.4	ns

Statistical analysis was performed using Pearson's χ^2 test, Fisher's exact test, Kaplan-Meier survival analysis and multivariable regression analysis.

Results

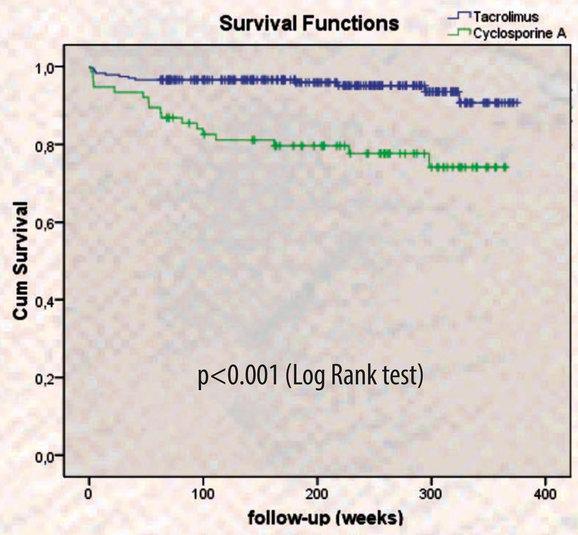

Fig. 1. Overall patient survival

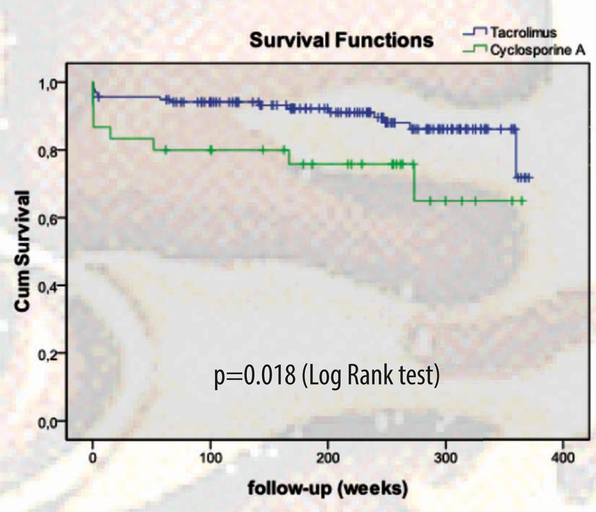

Fig. 2. Graft survival in patients aged 50 or less

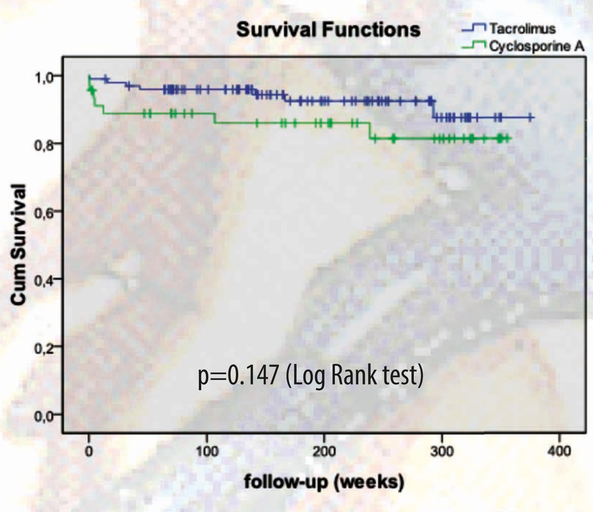

Fig. 3. Graft survival in patients aged over 50

Overall patient survival was significantly better in TAC group ($p<0.001$) – figure1. TAC was independent factor determining better survival of the patients (HR 3.45, $p=0.002$) when using multivariable regression analysis including age and the year of kidney transplantation.

Overall patient survival was significantly better in TAC group ($p<0.001$) Graft survival at 1 and 3 years was 95.7% and 94.0% in TAC group and 85.5% and 84.2% in CsA group ($p=0.006$ and $p=0.015$). When controlled for age, degree of sensitization and number od HLA mismatches, the type of CNI independently predicted graft survival (HR 2.63 for TAC, $p=0,011$). Interestingly, in a subgroup of patients older than 50 years the graft survival in both treatment groups was not different – figure 2 and 3.

Conclusions

Our kidney transplant recipients in the TAC group had higher 1-year graft survival. Based on the literature one year graft function may predict long term kidney transplant survival; in our study group this has to be proved in further analysis. In our opinion, tacrolimus should be preffered CNI especially in younger kidney transplant recipients.

REFERENCES

1. Ekberg H, Tedesco-Silva H, Demirbas A et al.: Reduced exposure to calcineurin inhibitors in renal transplantation. N Engl J Med 2007; 357: 2562–2575.
2. KDIGO Clinical Practice Guideline for the Care of Kidney Transplant Recipients, American Journal of Transplantation 2009, 9 (Suppl 3): S10-S13