Comparison of Low Dose and Very Low Dose Extended-release Tacrolimus / MMF in De novo Kidney Transplant Recipients

Shunji Narumi, MD,PhD[1], Yoshihiko Watarai, MD,PhD[1], Manabu Okada, MD[1], Kenta Futamura, MD[1], Takahiro Nagai, MD[1], Takayuki Yamamoto, MD,PhD[1], Makoto Tsujita, MD[1], Takahisa Hiramitsu, MD[1], Norihiko Goto, MD,PhD[1], and Takaaki Kobayashi, MD,PhD[2]

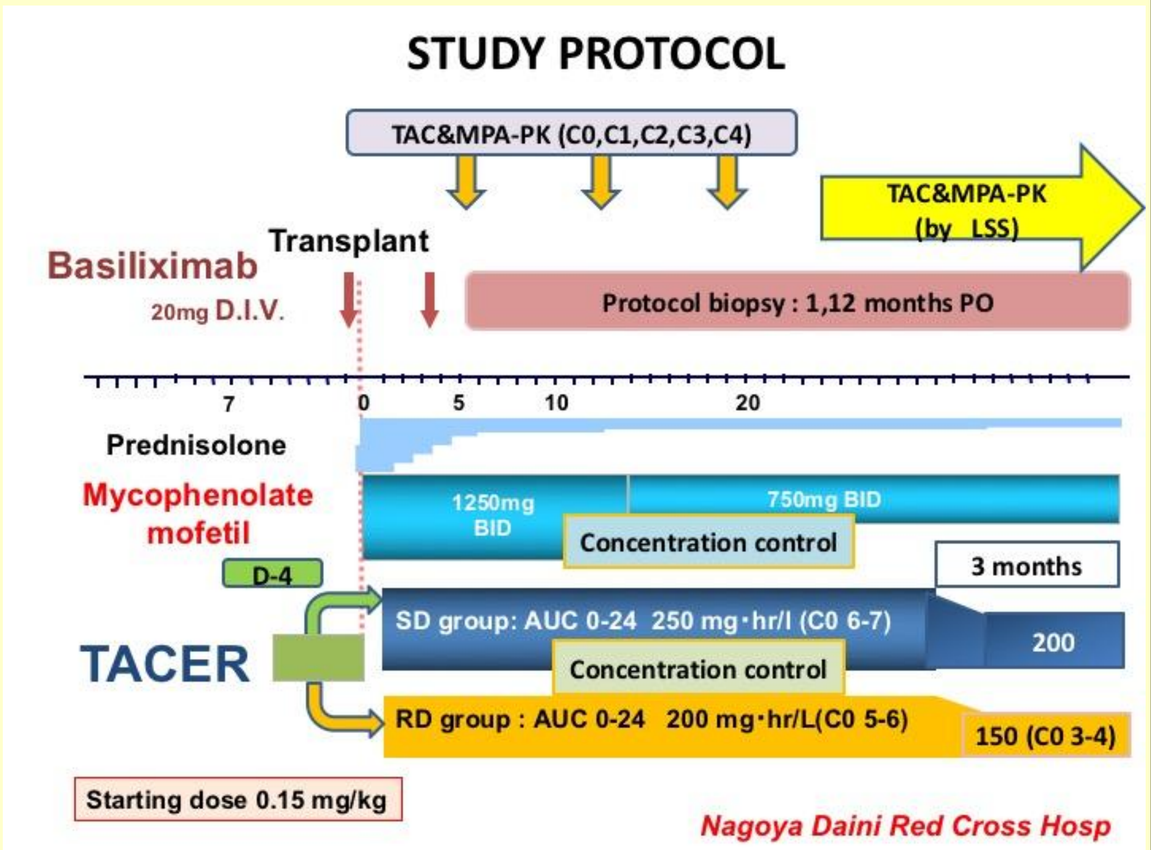
1 Transplant Surgery, Nagoya Daini Red Cross Hospital, Nagoya, Japan
2 Kidney Transplant Surgery, Aichi Medical University School of Medicine, Nagoya, Japan

OBJECTIVES

Recently, once-daily tacrolimus extended-release formulation (TACER) has been accepted in kidney transplantation, however its optimal dosing are not well evaluated. We have validated low dose (LD) and very low dose (VLD) TACER / MMF protocol in de novo kidney transplant recipients using limited sampling strategies to estimate tacrolimus exposure.

METHODS

Fifty Living-donor kidney transplant recipients were prospectively randomized into two group, 1) LD group (n=26) 2) VLD group (n=24). Subclinical rejection and CNI toxicity were evaluated by protocol biopsy after 1 and 12 months.

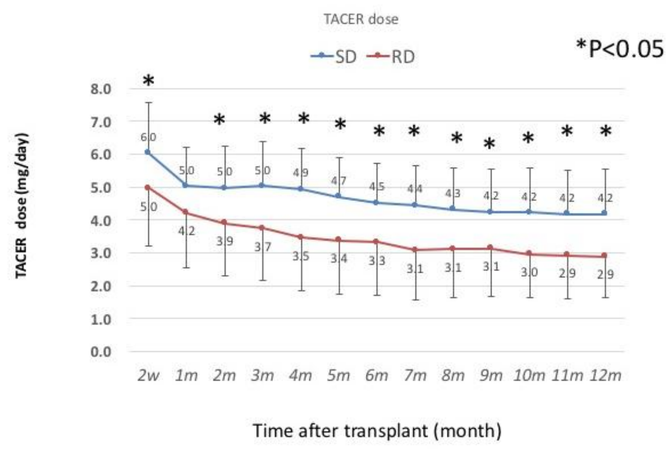


RESULTS

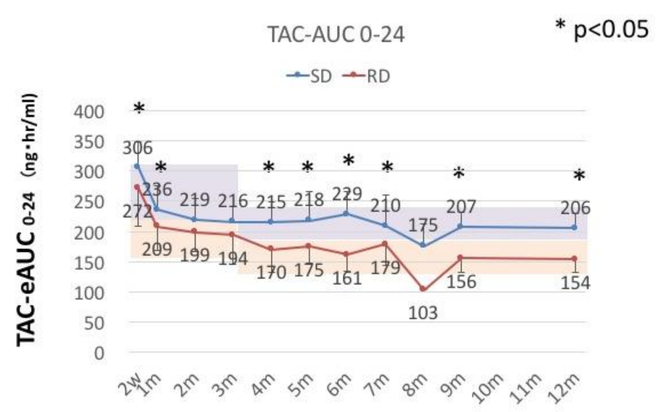
Recipient's characteristics

Number of patients	Standard dose(SD) group (n=26)	Reduced dose (RD) group (n=24)
Sex	Male 16 / Female 10	Male 16/ Female 8
Age	41.5±15.2 (18-63)	43.5±10.2 (27-65)
Recipient's BMI (kg/m2)	20.9±3.8 (15.8 – 30.2)	20.4±2.8 (15.9 - 25.9)
Dialysis vintage	7±17 (0-68) PRT 16/24 (%)	13±30 (0-132) PRT 14/24 (%)
Original disease	DMN 4 Non- DM 22	DMN 5 Non DM 19
Observation (month)	22.7±9.9 (9 – 39)	23.7±9.5 (9 – 40)

TACER dose



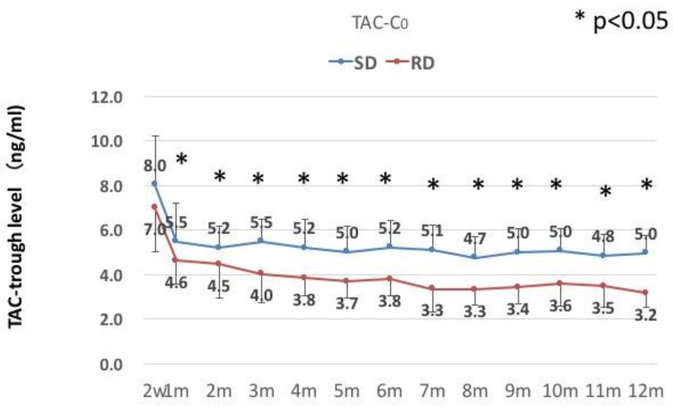
TAC-eAUC 0-24



Donor's characteristics

Number of patients	Standard dose(SD) (n=26)	Reduced dose (RD) (n=24)
Sex (M/F)	11/ 15	7/17
Age	56.8 ± 8.4 (37-74)	56.7 ± 11.2 (36-75)
BMI	22.9± 2.9 (17.9 - 29.7)	21.5± 2.5 (15.4 – 26.8)
Relationship	Spouse 8 (30.8%) Parents 17 (65.4%) Sibling 1 (3.8%)	Spouse 8 (33.3%) Parents 14 (58.3%) Sibling 2 (8.4%)
HLA mismatch Class I	2.2±0.8 (1-4)	2.3±0.5 (2-4)
HLA mismatch Class II	1.3±0.5 (1-2)	1.0±0.7 (0-2)

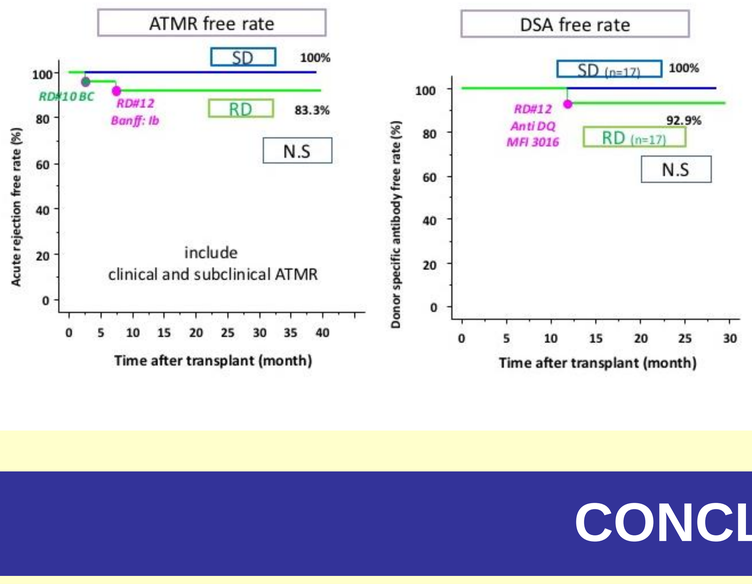
TAC-trough level



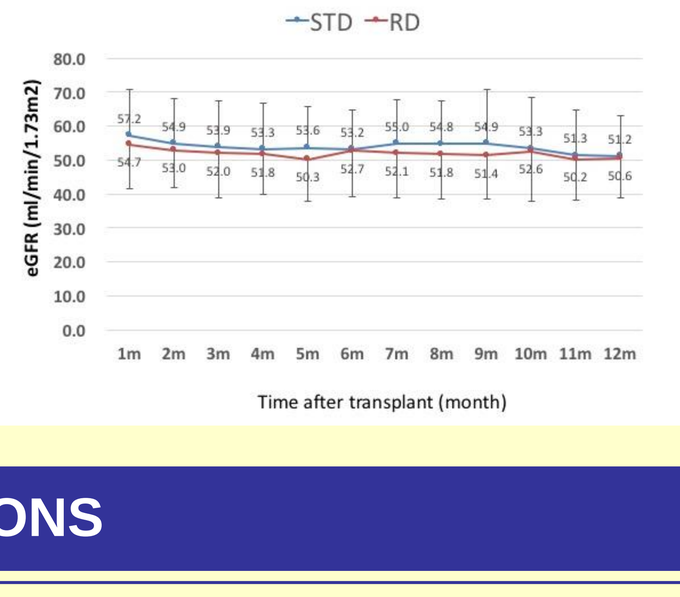
Efficacy

	SD	RD
Graft survival	26/26 (100%)	24/24 (100%)
Patient survival	26/26 (100%)	24/24 (100%)
TACER withdrawal due to adverse event	0/26 (0%)	0/26 (0%)
Acute T cell mediated rejection (by Clinical and Protocol Bx)	Clinical& subclinical 0/26 (0%) P=0.13	Clinical: 2/24 (8.3%) Subclinical 0/24(0%)
Acute antibody mediated rejection	0/26 (0%)	0/24 (0%)
CNI toxicity By protocol biopsy	At 3w Bx: 2/26 (7.7%) At 12m 2/21 (9.5%)	At 3w: 3/24 (12.5%) At 12m 1/20(5.0%)

Rejection & DSA free rate



eGFR after KTx



Morbidity

	SD	RD
CMV infection by pre-emptive Tx principle	D+/R- : 4/6 (66.7%) R+ : 4/19 (21.1%) D-/R- : 0/1 (0%)	D+/R- : 2/4 (50%) R+ : 2/18 (11.1%) D-/R- : 0/2 (0%)
	N.S	
NODAT 1y after KTx Diag. with OGTT	1/22 (4.5%) 4 pretransplant DM	0/16 (0.0%) 8 pretransplant DM
Other complications or Adverse event	Herpes Zoster 1/26 UTI 2/26 FSGS recurrence 1/26	Colon perforation 1/24 Prostatitis 1/24 Adenovirus infection 1/24

CONCLUSIONS

Tacrolimus exposure with TACER combination with MMF can be safely reduced to very low level under the therapeutic AUC level of TAC and MPA (quantitative immunosuppression ?),

- With slight increased, but not significant, incidence of rejection.
- With decreased, but not significant, incidence of CMV infection.

53 ERA
653--SP
Renal transplantation. Clinical.
SHUNJI NARUMI
DOI: 10.3252/pso.eu.53era.2016
ePosters supported by F. Hoffmann- La Roche Ltd.
53rd CONGRESS ERA-EDTA VIENNA AUSTRIA MAY 21-24 2016
PosterSessionOnline.com