RENAL TRANSPLANTATION IN AVERAGE SENSITIZED RECIPIENTS

Authors: *Zulkarnaev A., Vatazin A.*

Hospital: Moscow Regional Research and Clinical Institute, Russian Federation. Surgical department of transplantation and dialysis

INTRODUCTION

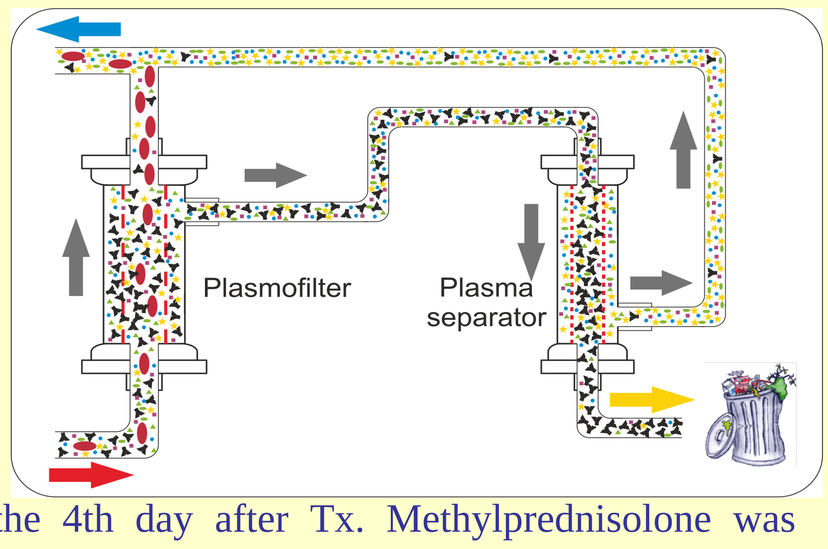
Preexisting antibodies is a serious problem in renal transplantation. There are a lot of different desensitization protocols for highly sensitized renal transplant recipient. There is no one opinion about using of average sensitization (PRA -20%)

OBJECTIVES

This study sought to compare the efficacy of two desensitization protocols: double filtration plasmapheresis (**DFPP**) with low-dose of intravenous immunoglobulin (IVIG) and high-dose IVIG only (without **DFPP**) among patients with low level of preexisting antibodies.

METHODS

We carried out a prospective randomized clinical trial to evaluate the efficacy of 2 desensitization protocols: 3-4 sessions of **double filtration plasmapheresis** (fig. 1) with low-dose intravenous immunoglobulin (100 mg/kg) and two session of high-dose IVIG (2g/kg) only. Study group includes 19 patients with average PRA was 25,1±6,1%. They received low IVIG dose. Comparison group includes 23 patients with PRA 18,9±4,4%). They received high IVIG dose. Crossmatch was negative in both groups.



Basic immunosuppression in both groups: tacrolimus – initial dose 2 mg/kg of body weight per day (target blood drug concentration for 1 month after the Tx - C_0 8-15 ng/ml), mycophenolate (mycophenolate mofetil or mycophenolic acid) - initial ng dose 1-2 g/day, prednisolone - initial dose of 30 mg per day.

Induction of immunosuppression: basiliximab 20 mg intravenously preoperatively and on the 4th day after Tx. Methylprednisolone was administered intravenously at the time of transplantation, 10 mg / kg, followed by the 1st and 4th day of 250 mg.

We used chi-square test, repeated measures ANOVA with a posteriori Tukey test, Kaplan-Meier curves with log-rank and Breslow criteria for statistical analysis.

RESULTS

6 episodes of acute rejection (cell-mediated IB, IB, antibody-mediated I, I, I, III – Banff`05) and 1 episode of infection were registered in the study group. 13 episodes (cell-mediated IA, IA, IB, IB, IIA, IIA, antibody-mediated I, I, I, I, II, III, III) and 3 episode were in the comparison group respectively. Acute rejection caused total lost of graft function in 4 patients of study group and in 8 patients of comparison group. It can usually appear during the first year after transplantation.

In the study group overall renal graft survival was 79% - fig. 2. It was 65% in the comparison group. Annual graft survival consists 94% and 62%, respectively.

Graft function was significantly better in the study group – fig. 3. 3 months after transplantation patients of the main group had a significantly lower level of daily proteinuria; 6 months – higher GFR and lower daily proteinuria. 1 year after transplantation patients of the main group had lower creatinine plasma level, higher GFR, lower daily proteinuria versus patients of control group.

It is interesting to note that using the same desensitization protocols anti-HLA donor-specific antibodies were determined in half of recipients of the comparison group and only in 4 patients of study group in a year after transplantation.

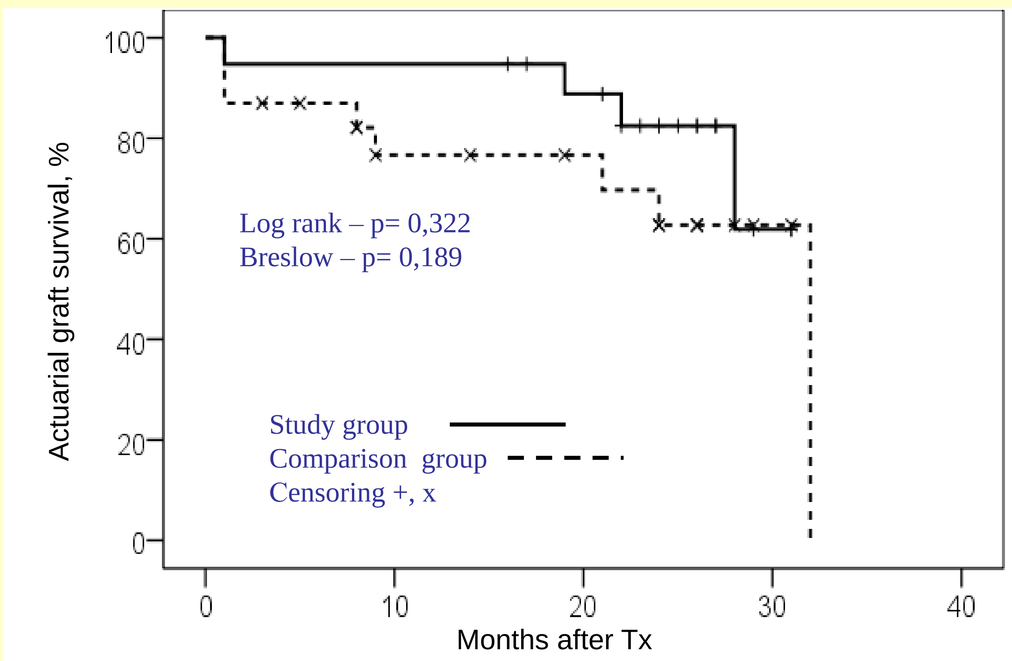


Figure 2. Actuarial graft survival

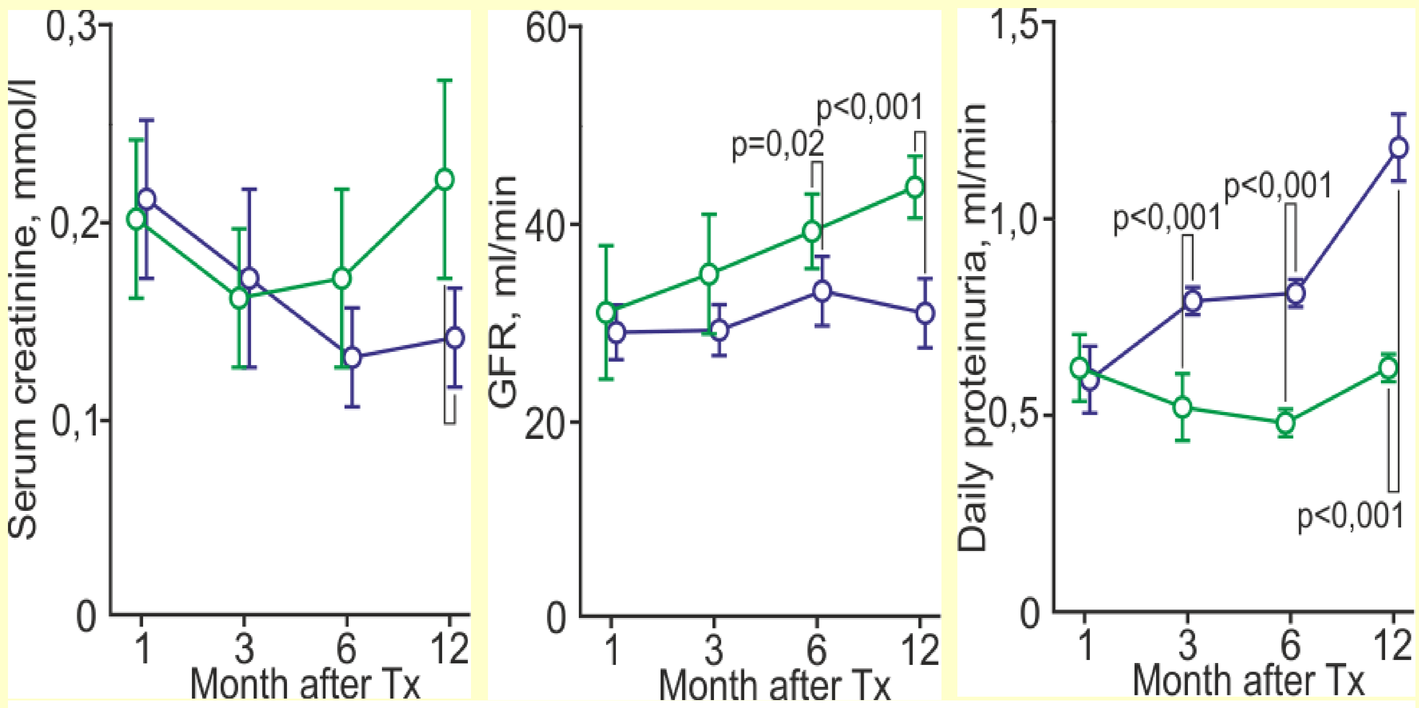


Figure 3. Clinical outcomes

CONCLUSIONS

Our study showed that increasing of acute rejection episodes and graft survival rate can be observed also in low sensitized recipients. Graft survival is higher in study group. Thus, double filtration plasmapheresis with low-dose intravenous immunoglobulin is more effective treatment compared to high IVIG dose regimen. It also has a beneficial effect on anti-HLA donor-specific antibodies production de novo. Further investigations are needed to evaluate the long-term clinical efficacy of this approach.

54 ERA
796--SP
Renal transplantation - Treatment & immunosuppre
Aleksei Zulkarnaev
DOI: 10.3252/pso.eu.54ERA.2017
ePosters supported by F. Hoffmann- La Roche Ltd.
PosterSessionOnline.com