EVALUATION OF INTRA-PATIENT VARIABILITY OF THE TACROLIMUS PLASMATIC LEVELS IN THE DIFFERENT PERIODS OF THE KIDNEY POST-TRANSPLANT

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Purpose

To assess the mean concentration, the intra-patient variability of tacrolimus plasmatic levels and their evolution along the different periods of kidney transplant.

Material and Methods

Observational retrospective study: January 2015 – minimum post-transplant follow-up of 2 years.

Kidney transplanted patients > 18 years old

Induction Early maintenance (EM) Late maintenance (M)

0 – 3 months 3 – 6 months > 6 months

Prevent acute rejection Prevent chronic rejection + Adverse reactions

Analized variables

- Mean of tacrolimus plasmatic concentrations
- Number of blood determinations
- Coefficient of variation

To describe the intra-patient variability was used the coefficient of variation

- Percentage of values lower than 5 ng/ml or 7 ng/ml (P5 and P7)
- Area under the concentration-estimated time

Therapeutic control is considered inadequate if intra-patient variability is superior to 30 % or the P7 or P5 is superior to 20 %.

Results

212 patients and 4180 tacrolimus blood determinations

* Range of therapeutic tacrolimus plasmatic levels values is established between 5-20 ng/ml

Conclusion

Tacrolimus plasmatic levels and the intra-patient variability during induction are higher than in early maintenance and late maintenance. However, patients with coefficient of variation superior to 30% remain in the maintenance periods between 29.9% and 31.8%; and with values lower than 5 ng/ml between 9.3 and 13.1% which would justify a greater need for pharmacokinetic monitoring and therapeutic control.