

Delayed introduction at reduced doses of prolonged-release tacrolimus in kidney transplants treated with quadruple immunosuppressive therapy

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Background:

The organ transplantation of expanded criteria donors (ECD) increases the risk of delayed graft function. In our hospital, in the transplantation of such kidneys are used a quadruple therapy: basiliximab, mycophenolate, corticosteroids and tacrolimus in deferred introduction at half-dose (0.1 mg/kg/day).

Purpose:

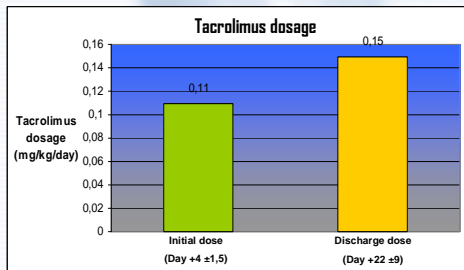
Evaluate the evolution of patients who have followed this regimen of immunosuppression.

Materials and methods:

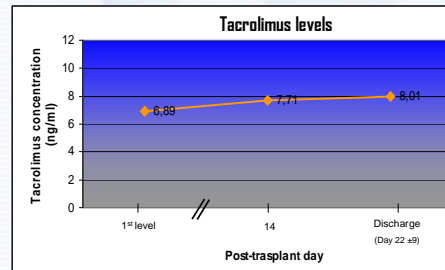
We analyzed all kidney transplant of ECD treated with quadruple immunosuppressive therapy from March 2009 to March 2010. The following data was obtained: donor and recipient age, incidence of delayed graft function and acute rejection, creatinine and glomerular filtration rate (GFR) at discharge, and length of hospital stay. About the treatment with prolonged release tacrolimus (PRT) was obtained: day of onset post-transplant, initial dose, dose at discharge and plasma levels. PRT dose was adjusted to achieve target levels of 8 ng/ml.

Results:

Population	Donors mean age	Recipients mean age
40 kidney transplants of ECD (53%♂, 47%♀)	60 +/- 13 years	58 +/- 11 years



In 26 patients (65%) the initial dose of PRT was increased.



Renal function at discharge	
Serum creatinine	2,15 ± 0.93 mg/dl
Creatinine clearance (Cockcroft-Gault)	43,37 ± 17 ml/min
GFR (MDRD)	33,93 ml/min/1.73m ^{2*}

* 3 patients had GFR > 60 ml/min

- 13 patients (32%) had delayed graft function.
- One episode of acute rejection was presented.

Conclusion:

With the delayed introduction at half-dose of PRT can be achieved target plasma levels, although moderate increases of doses are frequent. The clinical results are favorable, so could be a valid strategy to avoid the nephrotoxicity of calcineurin inhibitors, which are introduced later and at lower doses due to the coverage provided by the induction of immunosuppression obtained with basiliximab (approximate duration 4-6 weeks).