Outcome of Kidney Transplantation from Donation after Cardiac Death under Low Dose Calcineurin Inhibitor

Introduction and Objective: New immunosuppressive agents have dramatically reduced the incidence of acute rejection and improved short-term graft survival in kidney transplantation (KTx). These agents, however have not improved the long-term graft survival significantly. The aim of this study is to report the outcome of KTx from donation after cardiac death (DCD) under immunotherapy started with low dose calcineurin inhibitor (CNI).
Materials and Methods: Since November 1990, 127 KTx from DCD were performed at our center. The mean age of recipients and donors were 44.1 years and 47.2 years, respectively. The recipients' pre-transplant dialysis period ranged from 12 to 391 months (mean; 117 months). Seventy-eight patients were treated with cyclosporine (CsA), methylprednisolone (MP), anti-human lymphocyte globulin and azathioprine or mizoribine, 12 were treated with CsA, MP and mycophenolate mofetil (MMF) and 37 were treated with tacrolimus (TAC), basiliximab, MMF and MP. CNI was started immediately after transplantation with initial oral dose of 4 mg/kg/day in CsA or 0.15 mg/kg/day in TAC. These doses ware adjusted according to the blood concentration. The trough level was maintained below 100 ng/ml of CsA and 10 ng/ml of TAC during post-transplant ATN.
Results: Following transplants, immediate graft function was noted in 25 recipients (19.6%), and 98 patients (77.1%) had delayed graft function necessitating post-transplant dialyses for one to 39 days (mean; 9.3 days). Four grafts (3.1%) never recovered the renal function. The 1, 3, 5, 10 and 15 year patients and grafts survival rates post-transplant ware 98.3 vs. 98.3 %, 95.7 vs. 94.7 %, 92.7 vs. 87.9 %, 84.9 vs. 66.1 % and 80.4 vs. 53.3 %, respectively.
Conclusions: Employing immunotherapy starting with low dose CNI provided excellent long-term graft survival in DCD KTx.