Chronic allograft nephropathy (CAN) is the major cause of late graft loss. Among others, chronic calcineurin inhibitor toxicity (CNI) contributes to the development of CAN. Therefore, reduction in CNI dosage may delay the development of CAN, leading to longer graft survival. It was the aim of the present retrospective analysis to investigate the effect of mycophenolate mofetil (MMF) addition with subsequent cyclosporine A (CSA) reduction on renal function in pediatric kidney allograft recipients. Seventeen patients (aged 8.3-17.6 yr) with monotherapy with CSA and progressive loss of renal function at a median of 3.4 yr after kidney transplantation were enrolled. After at least three months of MMF treatment, CSA dosage was stepwise reduced to trough levels of 100, 80, and 60 ng/mL. In all patients, introduction of MMF prevented a further decrease of glomerular filtration rate (GFR). The mean GFR 12 months before study enrollment was 96.1 +/- 24.5 and 71.0 +/- 21.0 mL/min/1.73 m2 at start of MMF. After introduction of MMF and unchanged CSA dosage GFR was stabilized to 71.1 +/- 23.8 mL/min/1.73 m2. After CSA reduction to trough levels of 60 ng/mL, GFR was slightly ameliorated up to 76.3 +/- 24.1 mL/min/1.73 m2. Within the follow-up period, one borderline rejection occurred in a patient in whom the CSA trough level was 60 ng/mL since
seven months. In pediatric kidney allograft recipients with progressive loss of renal function reduction of CSA after introduction of MMF may stabilize and even slightly ameliorate renal function.