

Effectiveness and Cost of Replacing a Calcineurin Inhibitor With Sirolimus to Slow the Course of Chronic Kidney Disease in Renal Allografts

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Renal grafts suffer a progressive decrease in glomerular filtration rate (GFR) because of several factors including calcineurin inhibitor (CNI) nephrotoxicity. Switching CNIs to sirolimus may improve this adverse prognosis. We performed a prospective, open-label clinical trial among 18 kidney transplant patients with more than 12 months of evolution (range, 385-1826 days), showing progressive GFR decreases and biopsies with interstitial fibrosis and tubular atrophy (IFTA). Immunosuppressive treatment included cyclosporine, ketoconazole, and steroids associated with azathioprine or mycophenolate mofetil. After signing an Institutional Review Board-approved written consent, cyclosporine was switched to sirolimus seeking to achieve a trough blood sirolimus concentration of 6-15 ng/mL. Wilcoxon and Student's t-tests were used to compare the values in the annual periods before and after the switch. GFR was estimated by the Modification of Diet in Renal Disease formula. There were no acute r