Polyomavirus disease under new immunosuppressive drugs: a cause of renal graft dysfunction and graft loss

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BACKGROUND: Manifest polyomavirus (PV) renal graft infection is a rare complication. We diagnosed 5 cases among 70 kidney recipients undergoing transplants since December 1995; however, there were no cases at our institution before December 1995. METHOD: To identify risk factors promoting manifest PV graft infection, we compared those 5 patients with kidney recipients who had signs of PV replication but no manifest graft infection (n=23, control group). PV replication was judged by the presence of intranuclear inclusion cells in the urine. RESULTS: Before the infection, five of five patients had recurrent rejection episodes. All were switched from cyclosporine A to high dose tacrolimus as rescue therapy. Infection was diagnosed histologically 9+/-2 months posttransplantation; it persisted and led to graft loss in four of five patients. In control patients, graft function was stable, 1 of 23 patients were switched to tacrolimus as rescue therapy, and graft loss occurred in 4 of 23 patients. CONCLUSION: Recurrent rejection episodes and high dose immunosuppressive therapy, including tacrolimus, are risk factors for manifest PV kidney graft infection, which has an ominous prognosis.