



Relationship between Serum Creatinine and Tacrolimus Clearance in Renal Transplant Patients

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SUMMARY. According to the literature, cyclosporine in healthy volunteers yielded significant lower clearances than in patients with renal failure, uremic, or with kidney transplant. This could be due to a decreased renal blood flow these patients have and the negligible renal metabolism cyclosporine exhibits. However, in the case of tacrolimus, literature shows almost the same clearance in healthy volunteers and patients with renal impairment. This fact might be related with its dual ability of being eliminated, splanchnic and renal metabolism, and the relevant impact of CYP3A5 polymorphism. Eighty eight kidney transplant recipients under tacrolimus treatment were enrolled. Whole blood tacrolimus levels were determined and evolution of apparent clearance with serum creatinine was assessed. In some patients an increase in serum creatinine produced an increase in tacrolimus clearance, whereas others displayed an inverse effect with increasing serum creatinine. This fact gives new evidence about the impact renal metabolism would have on tacrolimus pharmacokinetics.

KEY WORDS: Clearance, Serum creatinine, Tacrolimus.

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