



## Successful cost effective prevention of Cytomegalovirus Disease in Kidney Transplant Recipients using low dose Valganciclovir

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### Introduction:

Prophylaxis for cytomegalovirus infection is highly recommended for kidney transplant recipients. Using valgancyclovir in low dose is still under investigation.

Our aim was to assess the cost effectiveness of 450mg valgancyclovir prophylaxis compared with 900mg for kidney transplants.

**Materials and methods:** In this prospective trial, 201 kidney transplants were randomized (1:1) to receive 450mg valgancyclovir prophylaxis (group1, n=100) or 900mg daily (group2, n=101) for the first 6 months post-transplant. Patients were studied for incidence of CMV disease, leucopenia attacks, rejection episodes and graft outcome and associated costs in one year duration. Direct costs associated with acquisition of immunosuppressive medications, diagnosing rejection, and hospitalizations were included. For each type of rejection (steroid-responsive or resistant), the resources used were categories composed of hospitalization, diagnostic tests, and prescribed drugs used to treat the rejection episode. The cost data from our hospital records and the costs were measured in US dollars.

**Results:** Demographic features of the studied groups were comparable. More patients have received tacrolimus in group1, while in group2 more patients were maintained on cyclosporine (p0.001). We found that the cost of CVM prophylaxis in patients of group 1 was significantly lower (by 50% at 6 months, p<0.001) with lower leucopenia attacks (p 0.04) and lower doses of granulocyte colony stimulating factor (by 30 % at 6 months 0.03) compared to group 2. Higher doses of mycophenolate mofetil (p 0.04) among group 1 patients were protective therefore they experienced less rejection episodes (p0.01). In group2; there were more cytomegalovirus infections requiring full treatment (p0.052) and more BK virus nephropathy (p0.03). Graft and patient outcomes were satisfactory in both groups. Mean estimated glomerular filtration rates were above 60 ml/min at baseline, at 6 months and at 12 months post-transplant for both groups.

**Conclusion:** Low dose valgancyclovir for cytomegalovirus prophylaxis after renal transplant is safer, effective and less costly than using usual dose.

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