



THE EVALUATION OF CMV INFECTION FREQUENCY AND RISK FACTORS IN KIDNEY TRANSPLANT RECIPIENTS RECEIVING CMV PROPHYLAXIS

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Objective: Cytomegalovirus (CMV) is the most common viral pathogen after renal transplantation. CMV infections may increase the risk of acute rejection, graft failure, patient death, opportunistic infections, malignancy, diabetes, and cardiovascular complications. Prophylactic antiviral therapy after transplant is the most effective strategy to reduce the incidence of CMV infections. In this study, we aimed to investigate the incidence of CMV infection and risk factors in kidney transplant recipients who received valganciclovir prophylaxis.

Materials and Methods: A total of 126 kidney transplant recipients received oral valganciclovir prophylaxis and underwent kidney transplantation due to end-stage renal disease in our center were included in the study. CMV infection was evaluated with CMV-DNA positivity measured by Abbott Real Time PCR technique. The patients were divided into two groups as CMV-DNA positive and negative and their features were compared.

Results: Of 126 kidney transplant recipients, 35 (27.7%) had CMV-DNA positivity. The demographic characteristics of CMV-DNA positive and negative recipients were similar. There was no difference between acute rejection ratios and kidney functions. CMV-DNA positivity ratios were comparable in the patients receiving immunosuppressive agents based cyclosporin or tacrolimus (35% vs. 21.2%, respectively, p>0.05). Anti-thymocyte globulin (ATG) usage due to acute rejection was significantly higher in recipients with CMV infection (22.8% vs. 8.7%, p=0.038). In addition, CMV infection occurred in 50% of patients who was given ATG.

Conclusion: CMV infection is a significant cause of morbidity and mortality in transplant recipients and antibody therapies used for induction or rejection are mainly responsible for its development. Especially, effective prophylaxis strategies should be developed in these patients.

Table 1. Comparison of features of CMV-DNA positive and negative recipients

	CMV-DNA positive- Pts (n=35)	CMV-DNA negative- Pts (n =91)	P value
Age (year)	43.4 ± 14.6	38.6 ± 12.9	0.076
Gender (male/female)	20/15	49/42	0.448
Transplant type (deceased/living)	24/11	48/43	0.079
Transplant duration (month)	16 ± 5.7	14.7 ± 6.4	0.314
Hepatitis B positivity (n,%)	3(8.5)	2(2.1)	0.131
Hepatitis C positivity (n,%)	0	0	
Diabetes Mellitus (n,%)	9(25.7)	15(16.4)	0.176
Acute rejection (n,%)	6(17.1)	10(10.9)	0.258
Serum creatinine (mg/dL)			
1.mo	1.85 ± 1.15	1.65 ± 1.39	0.468
Last follow-up	1.78 ± 0.7	1.76 ± 1.53	0.917
CMV infection period	2.22 ± 1.52	-	
CNI type (cyclosporin/tacrolimus)	21/14	39/52	0.063
ATG usage (n,%)	8(22.8)	8(8.7)	0.038

