

The Cytomegalovirus Infection among Iranian Kidney Graft Recipients

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Abstract : Background: Cytomegalovirus (CMV) infection is one of the most common infectious problems following kidney transplantation. In this study, we are aimed to investigate the CMV infection in the setting of renal transplant recipients in Urmia-Iran, using both ELISA and polymerase chain reaction (PCR) methods. Methods: Ninety-six renal transplant recipients were selected randomly and enrolled in a cross-sectional study. Blood sampling was done via venipuncture, and all sera were investigated for anti-CMV IgM, and the seropositive cases in association with 14 randomly selected seronegative cases were investigated with PCR assay. Results: Thirty-three patients (34.3%) were seropositive for anti-CMV IgM, 3 patients (3.1%) were in borderline range, and 60 patients (62.5%) were seronegative. By considering the patients with borderline anti-CMV IgM levels as seropositive, 37.5% were seropositive for anti-CMV IgM. Among 36 seropositive cases, the CMV infection was confirmed in 19 (52.7%) of them using PCR. Age ($P = 0.40$), educational status ($P = 0.77$), history of pre-transplantation dialysis (0.52), history of blood transfusion ($P = 0.52$), and immunosuppressive regimen were not statistically different among recipients with positive versus negative CMV PCR study results. Conclusion: The seroprevalence of CMV infection was demonstrated to be high in renal transplant recipients of Urmia-Iran. The rate was higher compared to several previous reports in the literature. ELISA method has an appropriate sensitivity to screen the recipients for CMV infection but considering its relatively low specificity, the seropositive cases are better to be confirmed by further PCR study.

Keywords : cytomegalovirus, renal transplantation, ELISA, IgM, PCR

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