

Cytomegalovirus infection among children with blood malignancies

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Abstract

Objective: To correlate the virologic and serologic study results of cytomegalovirus (CMV) with the clinical syndromes among children with hematological malignancies seen at King Abdulaziz University Hospital (KAUH) in Jeddah, Saudi Arabia. Patients and methods: A total of 49 children were studied. The patients were 27 children suffering from different hematological malignancies. Twenty two children were admitted to the study as controls. Human foreskin fibroblast (HFF) cell culture was used for virus isolation. Immunofluorescence assay (IFA) using monoclonal antibodies (abs) to CMV was performed on all infected cultures. Antibodies (IgM and IgA) to CMV in the sera were detected by an enzyme-linked immunosorbant assay (ELISA) and a Latex Agglutination test (IgG). Results: All patients showed seropositivity for anti CMV-IgG. Eighteen patients (67%) with positive anti-CMV IgG showed no evidence of active infection or excretion of CMV. Nine patients (33%) showed seropositivity. 2 of them (22%) with excretion of CMV in the urine but with no evidence of active infection, and the other 7 (78%) patients developed active CMV infection presented by excretion of CMV from one or more body sites, elevated or non elevated serum anti-CMV IgG and with or without the presence of anti-CMV IgM. Out of these 9 patients 2 had evidence of primary infection and the remaining 7 patients had latent CMV reactivation episode. Conclusion: The presence of anti-CMV IgA had no relation neither to the excretion of CMV, nor to the elevated anti-CMV IgG and to positive anti-CMV IgM. There was no CMV active infection in the control subjects evidenced by the absence of excretion of CMV in the samples, and negative anti-CMV IgM in the serum despite the detection of anti-CMV IgG which indicated past exposure to CMV early in childhood.

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