

JOINT EVENT

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Quantitative analysis of human herpesvirus 6 DNA in patients treated for acute leukemia

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Viral infections in hematological patients may result from reactivation of latent infection or, rarely, from acquisition of a new infection. It is extremely important to identify which patients or which treatment strategies are particularly at risk of viral infections to choose the suitable therapeutic procedure. Both acute lymphoblastic leukemia and acute myeloid leukemia patients receiving induction or consolidation chemotherapy are at the highest risk of viral infection. Thus, screening of patients with hematological malignancies for HHV-6 might be considered mandatory. The aim of this study was to evaluate a possible association between human herpesvirus-6 (HHV-6) infection and acute leukemia in adults after receiving chemotherapy treatment for acute leukemia. The patients were divided into two main groups according to the type of leukemia: Group I; 36 patients with newly diagnosed acute myeloid leukemia (AML) and Group II; 27 patients with newly diagnosed acute lymphoblastic leukemia (ALL); 21 patients with B-ALL and 6 patients with T-ALL. All 63 studied adult patients with newly diagnosed acute leukemia were subjected to history taking, complete clinical examination for the presence of organomegaly and routine laboratory investigations. Peripheral blood samples were collected from all patients for quantitative determination of HHV6 viral load by Taqman probe technique (real time PCR) at day 0 and day 100 of induction chemotherapy. The results argued against an etiological relationship between HHV-6 infection and the genesis of acute leukemia in adults, however, it supports the hypothesis of viral latency and the possibility of virus reactivation in immunocompromised hosts. The possible presence of HHV-6 as an associated or a putative causative agent in leukemia should however be considered. Recommendations include screening of patients with hematological malignancies for HHV-6 might be considered among the routine initial laboratory work-up.

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