

البحث الثالث : بحث فردى و منشور دوليا

Title: Elevated cytomegalovirus and Epstein Barr virus burden in rheumatoid arthritis: A true pathogenic role or just a coincidence.

Summary

Cytomegalovirus (CMV) and Epstein-Barr virus (EBV) have created great interest as their immune-modulatory action and latent forms could play a role in the advance of autoimmune diseases. Aim of the work: To investigate the viral load of CMV and EBV in the serum of rheumatoid arthritis (RA) patients' and study their association with the clinical and laboratory profiles. Patients and methods: The study included 50 RA patients and 32 healthy controls. Disease activity score (DAS28) was assessed and the medications received reported. Quantitation of CMV and EBV DNA in serum of all subjects was achieved by real-time polymerase chain reaction. Results: Patients were 38 females and 12 males with mean age of 43.1 ± 12 years, disease duration of 6.5 ± 5.7 years; age of onset 36.6 ± 12.8 years. CMV DNA was detected in serum of 68% (34/50) patients, while EBV DNA was detected in 40% (20/50). Fourteen (28%) patients had both EBV and CMV DNA detected in serum. No viruses were detected in serum of 10/50 (20%) patients or in healthy controls. The mean viral load of CMV and EBV detected were 42005 ± 24805 copies/ml and 18756 ± 24937 copies/ml respectively. A significant increased frequency of anemia ($p < 0.0001$), Raynaud's ($p < 0.0001$), oral ulcers ($p = 0.014$) and arthritis ($p < 0.0001$) was detected in those infected with CMV versus those infected with EBV.

Conclusions: A high incidence of CMV and EBV was detected in RA patients with increased viral load than described previously. Frequencies of RA disease manifestations are significantly higher in CMV infected patients compared to those infected with EBV.