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Title: The role of Epstein-Barr virus in Multiple Sclerosis

Authors: Adeleh najafipoor, Rasoul roghanian, sayyed hamid zarkesh esfahani, Vahid shayegan nejad, masoud etemadifar

Abstract: Introduction: Both epidemiological and experimental studies provide evidence for an association between Epstein-Barr Virus (EBV) infection and Multiple Sclerosis (MS). This includes the observation that all MS patients show serological markers of past EBV infection. EBV could activate autoreactive T cells by several mechanisms, but it is not clear why this leads to MS. The aim of this study was to evaluate the level of antibodies against EBV in MS patients and apparently healthy individuals.

Method: Sera were collected from 38 patients with primary clinical MS manifestation and 38 healthy individuals as control from the MS Clinic in Alzahra and Kashani Hospitals in Isfahan. The level of Immunoglobulin G (IgG) against EBV capsid antigen (EBV-CA) and Epstein-Barr nuclear antigen 1 (EBNA1) was assessed by using commercially available quantitative ELISA.

Results: Our results indicated that the level of EBV-CA and EBNA1 in all the MS patients’ sera were positive. However, 71% of the controls’ sera showed positivity against EBV-CA and EBNA1 (27 positive subjects and 11 negative subjects).

Conclusions: These finding suggest EBV plays an important role in the pathogenesis of MS but further studies are needed to evaluate its function.

Multiple sclerosis; Epstein–Barr virus; viral capsid antigen; Epstein-Barr nuclear antigen 1; ELISA

Presentation: Poster