EPO2250

Clinical predictors of disability in treatment-naive relapsing-remitting multiple sclerosis patients

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Background and aims: Multiple sclerosis is a demyelinating disease of the CNS characterized by progressive accumulation of disability. Investigation of risk factors for disability progression in multiple sclerosis (MS) is a prospective field of research. In the era of disease-modifying therapy (DMT), most such studies involve mixed populations of patients DMT-receiving and DMT-naive patients. Risk factors of disability in the natural course of MS are poorly outlined.

Methods: Clinical data of DMT-naive patients with relapsing-remitting MS (n=70, mean age 38.73±10.34 years) were retrospectively studied. EDSS score 4 was taken as a disability milestone (DM). 2 sets of clinical parameters (1 for symptoms at the MS onset and 1 for other onset-specific features) were studied as the risk factors for reaching the milestone using multivariate Cox regression.

Results: In Cox model, pyramidal symptoms at MS onset (HR 2.4, 95%CI 1.0-5.8, p=0.05), MS onset at >50 years (HR 5.5, 95%CI 1.4-21.1, p=0.013) and BMI <18.5 (HR 4.05, 95%CI 1.2-12.8, p=0.017) were associated with a higher risk, while EDSS 1 to 2.5 at MS onset (HR 0.23, 95%CI 0.098-0.52, p<0.001) was protective against reaching EDSS 4.

Conclusion: The risk factors identified in our study are consistent with other studies conducted in mixed populations suggesting the same trend for predictive factors in the pure population of DMT-naive patients.

Disclosure: Nothing to disclose

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The Epstein-Barr antibody paradox in Multiple Sclerosis

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Background and aims: Increased levels of serum and cerebrospinal fluid (CSF) antibodies against morbilli, varicella zoster and rubella, and increased serum antibodies against Epstein-Barr virus (EBV), are common features of MS. Paradoxically, several studies showed that the level of antibodies against the Epstein-Barr nuclear antigen 1 (EBNA1) is low in the CSF, which may be due to immune evasive properties of EBNA1 or to low level of exposure of this antigen in the central nervous system. Our objective is to determine whether low CSF antibody levels against EBNA1 also apply to an immunodominant viral envelope EBV antigen, gp350.

Methods: The level of anti-gp350 IgG was determined in serum and CSF in MS patients (n = 23) and healthy controls (n = 18) by an ELISA using a recombinant gp350 antigen The antibody index was calculated as adjusted QOD (QOD/ (total IgG CSF/total IgG serum)).

Results: The serum concentration of anti-gp350 IgG was higher in the MS patients. The CSF antibody index (adjusted QOD) for gp350 was significantly lower in the MS patients (0.070) than in the healthy controls (0.142, p<0.001). We obtained similar results if we included EBV seropositive controls only.

Conclusion: Our finding of low CSF gp350 antibody index is consistent with other reports on the EBV antibody paradox in MS, arguing against antigenic exposure of this virus in the central nervous system. Interaction with EBV in MS pathogenesis might be confined to the peripheral immune system.

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