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Titel des Beitrags:
Intrathecal CD8 T-cells of multiple sclerosis patients recognize lytic Epstein-Barr virus proteins.

Abstract:
The association between Epstein-Barr virus (EBV) and multiple sclerosis (MS) may involve intrathecal EBV-specific T-cell responses targeting the virus or indirectly, autoantigens. Compare the prevalence and fine-specificity of EBV-specific T-cells in the cerebrospinal fluid (CSF) of patients with MS (n = 12), clinically-isolated syndrome (CIS) (n = 17) and other neurological diseases (OND) (n = 13). Intrathecal EBV-specific T-cell reactivity was assayed using CSF-derived T-cell lines (CSF-TCL) and autologous EBV-transformed B-cells (autoBLCL) as antigen-presenting cells (APC). EBV proteins recognized by autoBLCL-specific CD8 T-cells were identified using human leukocyte antigen class I (HLA-I)-negative monkey cells as artificial APC, co-transfected with 59 different EBV genes and the corresponding patient’s HLA-I alleles that were involved in autoBLCL T-cell reactivity. Reactivity towards the MS-associated autoantigen ?B-crystallin (CRYAB) was determined analogously. CSF-TCL from CIS and MS patients had significantly higher frequencies of autoBLCL-reactive CD4 T-cells, compared to the OND patients. CIS patients also had significantly higher autoBLCL-reactive CD8 T cells, which correlated with reactive CD4 T-cell frequencies. AutoBLCL-specific CD8 T-cell responses of four CSF-TCL analyzed...
in detail were oligoclonal and directed to lytic EBV proteins, but not CRYAB endogenously expressed by autoBLCL. Enhanced intrathecal autoBLCL-specific T-cell reactivity, selectively directed towards lytic EBV proteins in two CSF-TCL, suggested a localized T-cell response to EBV in patients with MS. Our data warrant further characterization of the magnitude and breadth of intrathecal EBV-specific T-cell responses in larger patient cohorts.

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