

عنوان مقاله:

Alpha-tocopherol ameliorates experimental autoimmune encephalomyelitis through the regulation of Th1 cells

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خلاصه مقاله:

Objective(s): Multiple sclerosis (MS) is a serious neurological autoimmune disease, it commonly affects young adults. Vitamin E (Vit E) is an important component of human diet with antioxidant activity, which protects the body's biological systems. In order to assess the effect of Vit E treatment on this autoimmune disease, we established experimental autoimmune encephalomyelitis (EAE), the animal model of MS, and treated EAE with α -tocopherol (AT) which is the main content of Vit E. **Materials and Methods:** Twenty C57BL/6 adult female mice were used and divided into two groups randomly. EAE was induced with myelin oligodendrocyte glycoprotein (MOG), and one group was treated with AT, at a dose of 100 mg/kg on the 3rd day post-immunization with MOG, the other group was treated with 1% alcohol. Mice were euthanized on day 14, post-immunization, spleens were removed for assessing splenocytes proliferation and cytokine profile, and spinal cords were dissected to assess the infiltration of inflammatory cells in spinal cord. **Results:** AT was able to attenuate the severity of EAE and delay the disease progression. H&E staining and fast blue staining indicated that AT reduced the inflammation and the demyelination reaction in the spinal cord. Treatment with AT significantly decreased the proliferation of splenocytes. AT also inhibited the production of IFN- γ (Th1 cytokine), though the other cytokines were only affected slightly. **Conclusion:** According to the results, AT

ameliorated EAE, through suppressing the proliferation of T cells and the Th1 response. AT may be used as a potential .treatment for MS

کلمات کلیدی:

Alpha-tocopherol, Autoimmunity, Inflammation, Multiple Sclerosis, Vitamin E

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