عنوان مقاله:

New therapeutic approach by G2013 in experimental model of multiple sclerosis

محل انتشار:

شانزدهمین کنگره بین المللی ام اس (سال: 1398)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Multiple sclerosis (MS) is an autoimmune disease of the central nervous system (CNS) that leads to an inflammatory demyelination and axonal damage. MS disease often displays a relapsing–remitting course of neurological manifestations that is mimicked by experimental autoimmune encephalomyelitis (EAE) in animal models. The aim of the present research was to test the therapeutic effect of small molecule G2013, a novel designed non-steroidal anti-inflammatory agent in EAE. All experiments were conducted on C57BL/6 male mice aged 10 weeks. To induce the EAE, we performed subcutaneously injection of myelin oligodendrocyte glycoprotein- 35-55 (MOG35-55) in Complete Freund's Adjuvant (CFA) emulsion, and for treatment of EAE we used intraperitoneal (IP) injection of G2013. On day 21 postimmunization, for total antioxidant, nitric oxide (NO) and TNF-a assessment, blood samples were taken from the heart and mice were killed, and the brains and cerebellums were then removed for histological analysis. Our findings demonstrated that G2013 had beneficial effects on EAE by lower incidence, attenuation in the severity, and a delay in the onset of disease. Histological analysis showed that inflammation criteria including the number of inflammatory cells and plaques as well as demyelination in G2013 dosed mice were lower than control group. Moreover, the serum level of NO in G2013-treated mice was significantly less than control animals. These data indicate that G2013 therapy can attenuate the disease progression in experimental model of MS.

کلمات کلیدی:

EAE. Multiple sclerosis. Nitric oxide . Inflammation