

عنوان مقاله:

The Comparison of Therapeutic Effects of Hemp Seed/ Evening Primrose Oil Supplement in Spleen cells with Rapamycin

محل انتشار:

سومین کنگره بین المللی و پانزدهمین کنگره ملی ژنتیک ایران (سال: 1397)

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خلاصه مقاله:

Background: Experimental autoimmune encephalomyelitis (EAE) is a murine model that the most commonly used experimental model for the human multiple sclerosis (MS). Because of limited efficacy and adverse side effects of the current treatments, identifying novel therapeutic agents is important. We investigated whether hemp seed/ evening primrose oils (EPO/HSO) in comparison with rapamycin (RAPA) plays a role in MS treatment. Methods and materials: Chronic-EAE was induced by myelin basic protein (MOG) in C57/BL6 mice that were assigned to three groups (6/group). To evaluate the therapeutic effects of EPO/HSO in comparison with RAPA. Group A: mice were co-administered with EPO/HSO + RAPA; group B: mice were injected with RAPA; C group: mice were fed with EPO/HSO. Results were compared to two control groups. Mice were euthanized on day 28 of post-immunization. The weight, clinical score and histological findings were evaluated. The immunological factors (genes expression of mTORC1, mTORC2, IFN- γ , and IL-10 of spleen cells) were assessed. Results: EPO/HSO was able to attenuate the severity of EAE and delay the disease progression. Treatment with only EPO/HSO significantly inhibited the genes expression of mTORC1 and IFN- γ and promoted the genes expression mTORC2 and IL-10. Conclusion: EPO / HSO treatment improved and reduced various parameters of EAE severity in the mice, including clinical score, immunological, and histological findings. These results suggest that The EPO/HSO is likely participating in demyelination in the spinal cord the MS development, and that it could serve as an effective therapeutic target for the

کلمات کلیدی:

Spleen cells, Oenothera biennis L, Cannabis sativa L, PUFA, Adjuvant

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