عنوان مقاله:

COMBINATION TREATMENT OF DOCOSAHEXAENOIC ACID (DHA) AND ALL-TRANS-RETINOIC ACID (ATRA) INHIBIT IL-17 AND RORΓT GENE EXPRESSION IN PBMCS OF PATIENTS WITH RELAPSING-REMITTING MULTIPLE SCLEROSIS

محل انتشار:

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

تعداد صفحات اصل مقاله: 2

نویسندگان:

Ateke Mousavi - *Department of Cellular and Molecular Nutrition, School of Nutritional Sciences and Dietetics, International Campus, Tehran University of Medical Sciences, Tehran, Iran*

Abbas Mirshafiey - *Department of Immunology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran*

Abdorreza Naser Moghadasi - *Department of Neurology and MS Research Center, Neuroscience Institute, Sina Hospital, Tehran University of Medical Sciences, Tehran, Iran*

Reza Chahardoli - *Endocrine Research Center, Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran*

خلاصه مقاله:

Background and Aim: Multiple sclerosis (MS) is a demyelinating disorder with a complex autoimmune pathophysiology. Its initiation and progression correlate with IL-17 and the related transcription factor, RORγt. All-trans retinoic acid (ATRA) is a bioactive derivative of vitamin A, and docosahexaenoic acid (DHA) is an active metabolite of omega-3 fatty acid; both have immunomodulatory effects in many immune disorders. This study investigated the effects of DHA and ATRA individually and in combination on IL-17 and RORγt gene expression in peripheral blood mononuclear cells (PBMCs) of relapsing-remitting MS (RRMS) patients who were receiving interferon beta (IFN-β).Methods: The PBMCs of 15 RRMS patients were treated in vitro with 1 μM of ATRA and 15 μM of DHA as single and combination treatments for assessing probable additive or synergistic effects.Results: The results showed that single treatment of ATRA ($p = 0.05$) could significantly decrease the expression of IL-17 gene and single treatment of ATRA ($p = 0.04$) and single treatment of DHA ($p = 0.05$) induced significant inhibition on the expression of RORγt gene. The suppressive effect of combined treatment with ATRA and DHA on IL-17 ($p = 0.02$) and RORγt ($p = 0.01$) was also found significant showing that the combined treatments can have additive effects.Conclusion: These results indicate that both DHA and ATRA might help control disease progression in IFN-β .treated RRMS patients with the strongest effects produced by a combination of the two compounds

کلمات کلیدی:

Multiple sclerosis; PBMCs; RORγt; all-trans retinoic acid; docosahexaenoic acid; interleukine-17

لینک ثابت مقاله در پایگاه سیویلیکا: