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Specific Omega-3, Omega-6 Polyunsaturated Fatty Acids and γ-Tocopherol in the Therapy of Relapsing Multiple Sclerosis (MS): The Paradigm of NEUROASPIS® PLP10 Intervention Efficacy

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Introduction: MS treatments are products of reductionism, partially effective with no (re)myelinating/neuroprotective abilities associated with significant side-effects. We aimed to assess whether our novel interventions, formulated based on systems medicine (SM), comprising specific polyunsaturated fatty acids (PUFA) and vitamins reduce disease activity in patients with relapsing remitting (RR) MS who were either treated with disease modifying treatment (DMT) or untreated.

Methods: We contacted a 30-month randomized, double-blind, placebo-controlled, proof-of-concept clinical study at the CING. Of a total of 80 patients, 20 were randomly assigned to receive intervention A (docosahexaenoic acid (DHA)/eicosapentaenoic acid (EPA) (3:1w/w) omega-3, linoleic acid (LA)/gamma(g)-linolenic acid (GLA) (2:1w/w) omega-6 fatty acids, omega-3/omega-6 (1:1w/w), other specific PUFA, monounsaturated fatty acids (MUFA), minor quantity of specific saturated fatty acids (SFA), vitamin A and vitamin E), 20 to receive γ-tocopherol, intervention C, 20 to receive the combination of A and C, intervention B (PLP10) and 20 to receive placebo, as an oral solution, once daily. The primary end point was the annualized relapse rate (ARR) and the key secondary end point was the time to disability progression. ISRCTN87818535.

Results: PLP10 reduced the ARR by 70% (p=0.003), in relation to the baseline ARR and the placebo increased by 46% (p=0.354). For the primary end point, PLP10 reduced the ARR by 58% (p=0.016) and for the secondary end point, significantly reduced the risk of sustained progression of disability by 86% over the 2-year period (p=0.047) vs. placebo. More patients in the PLP10 group (72%) vs. placebo group (20%) were free from new or enlarging T2-weighted lesions on brain MRI scans over the 2-year study. No adverse events were reported. Interventions A and C showed no significant efficacy.

Discussion: PLP10 treatment significantly reduced the ARR, and the risk of sustained disability progression without any adverse or significant side effects. This is the first clinical study of SM approach medical nutrient formula that holds strong promise as an effective treatment for RRMS.

Biography:

Dr. Ioannis S Patrikios completed his PhD studies in Biochemistry in 1994, from the City University of New York, USA. Recently he was offered and now serves as a Fellow of the Academy of Forensic Medical Science, UK and member of the Advisory Board. His 2002 research findings on the effect of frying oils as human hemagglutinins got an international interest. He has been appointed as a reviewer of international scientific journals in the field of Medicine, Med-Biochemistry, Pharmaceuticals-Therapeutics and Neurology and as a reviewer for research grants. Professor Patrikios is the founder and solid organizer of the annual event "International Multithematic Medical Congress, Biomedical Scientific Cyprus (BSC)" an International annual scientifically prestigious congress. He is a member of several International associations and bodies including Sigma Xi. He is the chief scientific investigator of the team that lately invented and patented the nutraceutical formula Neuroaspis® PLP10 as a new therapeutic intervention for multiple sclerosis. At present, he serves as the Acting Chairman of the School of Medicine, European University Cyprus and affiliated as a research collaborator at the Cyprus Institute of Neurology and Genetics, Cyprus.