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Effect of Omega-3 supplementation on quality of life in patients with severe COPD

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Introduction: The polyunsaturated fatty acids (PUFAs) in fish oil strengthen the immune system, are beneficial for allergies, asthma, chronic obstructive pulmonary disease (COPD) etc., reduce cholesterol and triglyceride levels and blood inflammatory parameters (CRP, IL-6, IL-8, TNF-alpha), and play a role in the prevention and treatment of diseases, also.

Objective: The aim of our study was to monitor Omega-3 supplementation in severe COPD and assess its association with quality of life.

Method: Our questionnaire was completed by 200 patients with COPD at National Korányi Institute of Pulmonology in Hungary, mean age 67 (61-72) years; FEV1 (ref%): 47 (33-58); 48% male, 52% female. We used the disease-specific COPD Assessment Test (CAT) questionnaire to measure quality of life.

Results: More than half of the study participants (59%) did not consume fish or oilseeds at all. 5% of patients (n=10) take Omega-3 supplementation regularly, mainly on medical advice (0.5 g/day). We observed significantly lower serum CRP levels (6.0 (1-13) vs. 14.1 (2-29); $p<0.05$), more favourable lipid profile (triglycerides, LDL and HDL cholesterol with higher mean BMI: 28.3 vs. 25.9 kg/m²), better quality of life (CAT: 26.0 (20-28.5) vs. 27.0 (20.5-29.5); $p=0.119$), lower inhaled short-acting bronchodilators use (SABA) and lower number of exacerbations in the previous year (1 (0-2) vs. 2 (1-3); $p<0.05$), higher 6-minute walk distance (6MWD: 298 (177-365) vs. 250 (150-325); $p=0.110$) in the group with Omega-3 supplementation.

Summary: Polyunsaturated fatty acids are anti-inflammatory and affect the immune system. Our study shows that Omega-3 intake of COPD patients is insufficient and there is an urgent need to develop new anti-inflammatory strategies, because only one drug (such as corticosteroids) cannot ease the chronically progressive inflammatory process of COPD.

Keywords: omega-3; PUFA; COPD; quality of life; CAT

Biography:

Monika Fekete MD, a doctor and teacher at Semmelweis University in Hungary, I am 43 years old and I have two daughters Diana and Dorina, 18 and 15 years old. My research interests are nutritional status of COPD patients and factors affecting their quality of life, such as omega-3 intake, vitamin D intake, BMI, FFMI, influenza and pneumococcal vaccination uptake and other determinants. I am currently teaching about 100 medical students, my specialties are prevention and epidemiology, and public health

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