Poster

Importance of food sensitivities and personalized diet in patients with fibromyalgia

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ABSTRACT

Fibromyalgia (FM) is a disease characterized by generalized chronic pain located in the locomotor system. Patients usually present obesity, metabolic syndrome, alterations in the microbiota and food sensitivities. The prevalence is 2.1% in the world population, affecting 2.3% of Europeans and 2.4% of Spaniards. By sex, the prevalence among men is estimated at 0.2%, compared to 4.2% in women. FM is one of the rheumatic diseases with more impact on the quality of life. Nutrition has been suggested as a relevant factor in the treatment and improvement of FM symptoms. The aim of this study was to measure mitochondrial homeostasis using several biomarkers for the diagnosis and monitoring of FM before and after the application of a personalized nutritional intervention with a rich antioxidant diet. Furthermore, we evaluated the role of personalized nutrition as a potential treatment for patients with FM and identified new approaches for a better understanding of the disease.

Motivation: Currently, a significant percentage of patients who suffer FM are not well diagnosed and face inadequate treatments. We proposed that personalized nutritional interventions can improve the symptomatology of patients and their quality of life.

Methods: Fifty FM patients with clinical suspicion of food sensitivities were included in the study. Data were collected from nutritional questionnaries, the Fibromyalgia Impact Questionnaire (FIQ) and the ratio of mitochondrial mass and selective autophagy. Mitochondrial markers were measured pre and post nutritional interventions with the objective of evaluating if personalized diets improved clinical symptoms.

Results: Rich antioxidant diets decreased radical oxygen species (ROS) levels in blood and improved significantly clinical symptoms. In addition, a balanced, personalized diet for each patient improved the ratio between mitochondrial mass and selective autophagy.

Conclusions: FM patients presents several associated comorbidities such as food sensitivities which need more attention and research. The adequate consumption of antioxidants and other micronutrients is important in FM management. Therefore, personalized antioxidant diets could be a promising approach for the improvement of clinical symptoms in FM.

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