SESSIONE: NEURODEGENERAZIONE E NEUROINFIAMMAZIONE

DEVELOPMENT OF A HOME-BASED TRAINING PROGRAM FOR PATIENTS WITH PARKINSON DISEASE: NEUROBIOLOGICAL AND MOTOR SKILLS EFFECT

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Neurodegenerative diseases are inherited diseases of the central nervous system, which cause progressive damage to specific populations of neurons and lead to a deterioration in the quality of life (1,2). Parkinson disease (PD) is a progressive neurodegenerative disease and is the second most common after AD, and is characterized by postural instability, tremor and rigidity. Moreover, physical activity can reduces risk of other geriatric diseases such as diabetes, hypertension, osteoporosis and cardiovascular disease, which may also contribute to PD pathogenesis (3).
We enrolled 12 subjects (age: 62.74 ± 4.94; height: 175,5cm ± 7,41 cm; weight: 75,5 ± 17,95 kg) affected by PD. An home-based training program was developed for 12 weeks, 3 times a week, an hour and a half for each session. At the beginning (T_0), at the end of the study (T_1) physical parameters (strength, balance and eye-hand reactivity) and hematochemicals parameters (glycemia, insulin, bone metabolism markers and neurotrophins) were tested. Statistical analyzes were performed using R version 3.4.3 and IBM SPSS Statistics 22.
Changes in anthropometric, physical parameters, and hematochemical measurements between T_0,T_1 were evaluated using *t* Student test for paired data. The results obtained have confirmed that this protocol can influence over all bone metabolism markers; in fact parathormone decrease T_0 62,250 to T_1 35,675 ng/ml, p value <0,05, whilst vitamin D increase from T_0 16,500 to T_1 23,875 ug/ml, p value <0,05. These are just a preliminary results that need to be deep investigated to better understand the effect of physical activity in PD.

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