MULTIPLE SCLEROSIS AND EXERCISE: EVALUATION OF A PROGRAM
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Multiple Sclerosis (MS) is a chronic inflammatory disease of the central nervous system that leads to the destruction of myelin, oligodendrocytes and axons. This disease predominantly affects young adults in their most productive years. The demyelination is associated with the many symptoms experienced by people with MS. The symptoms vary widely across patients, but the pathophysiology is characterised by fatigue, spasticity, poor balance, motor weakness, heat sensitivity and mental depression. This, and other symptoms, reduce individual’s ability to perform activities of daily living and social interactions and may lead to physical inactivity associated with the development of secondary diseases. A multidisciplinary approach to MS is important to improve and maintain functional abilities, management of physical exercise has an important role in this process.

In a clinical setting we have been run a program of adapted physical activity (APA) for people with MS, based on a specific training program that stimulated aerobic fitness, strength and flexibility. Moreover, emotional aspects and motivating atmosphere have been cared. The purpose of our study (designed as pre-post case study) was to evaluate the effects of an APA program on functional capacity, quality of life perception (QOL), fatigue and independence. Eight clinically definite MS patients, 4 men and 4 women (mean age 46.63 ± 8.18 years, mean disease duration 8.25 ± 5.18 years), with mild to moderate disability (Expanded Disability Status Scale range 2.5-4.5) participated in a 20-sessions exercise program. The intervention consisted of an aerobic, strength and flexibility circuit training with individualized intensity that took place 3 times a week and was practised by 2 patients simultaneously. The sample were evaluated, at baseline and at 8 weeks, by means of differente instrument. SF-36 (Short Form-36 Health Survey) and WHODAS II (World Health Organization Disability Assessment Schedule II) were used to assess health and QOL perception; FIM (Functional Independence Measure) and BARTHEL (Modified Barthel Index) to assess patients’ autonomy; FSS (Fatigue Severity Scale), FDS (Fatigue Descriptive Scale) and Modified Fatigue Impact Scale were used to evaluated teh perception of fatigue. Moreover, functional tests were made to assess changes in maximal oxygen uptake (VO2max), in endurance (6-Minute Waking Test), in walking speed (T25-Foot Walk) and in upper extremity function (9-Hole Peg Test).

Compared with baseline the MS patients demonstrated a significant improvement of QOL perception (WHODAS II +10.20%, p<.01, role physical +120% p<.026 and vitality +33.85% p<.012) and of fatigue sensation (FSS +12.85% p<.034, FDS +12.20% p<.049). Even though the short duration of the training, also functional capacity had registered increments.

Our findings lead us to support that a specific APA program could be an important functional element within a therapy program aimed at the treatment of MS.

Keywords: Fatigue, Chronic Diseases, Adapted Physical Activity