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Abstract

The effect of endurance training on quality of life in female patients with multiple sclerosis

Introduction: The purpose of this study was to evaluate the effect of twelve-week progressive endurance training on quality of life (QOL), in female with multiple sclerosis (MS).

Methodology: Twenty-Four female MS patients with the following demographics: age 27-45 years, and EDSS (Expanded Disability Status Scale) 2-4, were participated in this study. The subjects were randomly allocated to one of two groups. The exercise group (n =12) trained according to a progressive program, three times a week, for twelve weeks, 60 minutes each session and compared with subjects in the control group (n =12) that received no intervention. Endurance training includes pedaling on cycle ergometer. The pedal cadence was set at 60 revolutions per minute (rpm), and the resistance adjusted to a level appropriate for the subject's exercise background. The resistance was adjusted individually to maintain 60 rpm. Quality of life was assessed before and after the protocol in both groups by using SF-36 questioner. SF-36 consists of two parts: Physical Component Summary (PCS), and Mental Component Summary (MCS), and each one had four categories which consists of: General Health (GH), Physical Functioning (PF), Role-Physical (RP), Bodily Pain (BP), and Vitality (V), Social Functioning (SF), Role Emotional (RE), Mental Health (MH), respectively. Descriptive statistics and Co-variance were used for analyzing data.

Results & Discussions: The results of this study indicated that endurance training leads to significant improve MCS (P=0.01, F=16.08), and MH (P=0.01, F=28.43) ($P < 0.05$), which was category of MCS in QOL questionnaire. The result showed that exercise training is associated with a small improvement in QOL among patients with MS. The improvement in QOL associated with exercise training could be related to mood, personality and ability of movement in individual with MS, and type of exercise training.

Conclusion: The results emphasize the importance of encouraging physical activity as a health promotion behavior in individuals with MS.

Key Words: multiple sclerosis, endurance training, quality of life