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UTICAJ INTERVALNOG TRENINGA NA PARAMETRE HODA OSOBA SA PARKINSONOVOM BOLEŠĆU- EKSPERIMENTALNA KLINIČKA STUDIJA

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Sažetak. Trening hoda je važan i efikasan segment kineziterapije i rehabilitacije za osobe sa Parkinsonovom bolešću. Specifičnost poput intervalnog treninga u literaturi je ukazala na poboljšavanje kardiorespiratorne kondicije ali ne i na kvalitet hoda i dinamičku stabilnost.Cilj rada je ispitati uticaj tredmil intervalnog treninga kod osoba s Parkinsonovom bolešću na parametre hoda. Prospektivna eksperimentalna, dvostruko slijepa studija sprovedena kod 46 pacijenata starosti 63.3±9.8 godina odabranih slučajnim uzorkovanjem raspoređenih u dve grupe na osnovu parnih i neparnih numera. Tokom 21 rehabilitacionog dana, svi ispitanici su imali 5 dana u sedmici istovjetan opšti program kineziterapije i okupacionu terapiju u trajanju od 80 min, a eksperimentalna grupa je imala i dodatni program na tredmil traci u vidu intervalnog treninga sa po 4 minute njihove prosječne brzine hoda i 3 minute pauze kroz 4 ponavljanja. Ishodi rehabilitacije praćeni su primjenom standardizovanih testova Tineti Balance Scale, Time Up and Go (TUG) test te objektivnom analizom softwerskog programa Zebris HP cosmos FDMT uređajem na početku i na kraju rehabilitacije. Mobilnost i balans pacijenata ocjenjen Tinetti testom je pokazao bolje rezultate u eksperimentalnoj grupi pre i posle tretmana, značajnost između grupa u pogledu promjene iznosila je p = 0,3. Statistička značajna razlika između grupa u pogledu UP&GO iznosila je p = 0,4. Pacijenti u obe grupe imaju sličnu fazu oslonca, fazu zamaha, dvostruki oslonac, dužinu koraka, vrijeme koraka i ritam, uključujući promjene nakon tretmana. Nije primjećena značajna razlika u poboljšanjima između grupa. U kontrolnoj grupi primijećeno je značajno smanjenje ukupnog dvostrukog oslonca i kadence. U eksperimentalnoj grupi primijećeno je značajno povećanje dužine koraka i povećanje brzine hoda. Objektivna mjerenja ishoda intervalnog treninga na tredmil traci nisu potvrdila veću značajnost i bolje rezultate prostorno-vremenskih parametara hoda u odnosu na standardni program rehabilitacije.

Ključne riječi: Intervalni tredmil trening, rehabilitacija, Parkinsonova bolest

THE EFFECT OF INTERVAL TRAINING ON THE GAIT PARAMETERS OF PEOPLE WITH PARKINSON'S DISEASE: AN EXPERIMENTAL CLINICAL STUDY

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Abstract. Gait training is an important and effective segment of kinesitherapy and rehabilitation for people with Parkinson's disease. Specificity such as interval training in the literature indicated an improvement in cardiorespiratory fitness, but not on gait quality and dynamic stability. The aim of this study is to examine the effect of tredmil interval training in people with Parkinson's disease on gait parameters. A prospective experimental, double-blind study conducted in 46 patients aged 63.3±9.8 years selected by random sampling assigned to two groups based on even and odd numbers. During the 21 rehabilitation days, all subjects had 5 days a week the same general program of kinesitherapy and occupational therapy lasting 80 minutes, and the experimental group had an additional program on the treadmill in the form of interval training with 4 minutes of their average walking speed and 3 minutes of break through 4 repetitions. Rehabilitation outcomes were monitored by the application of standardized tests Tineti Balance Scale, Time Up and Go (TUG) test and objective analysis of the software program Zebris HP cosmos FDMT device at the beginning and end of rehabilitation. The mobility and balance of patients assessed by the Tinetti test showed better results in the experimental group before and after treatment, the significance between the groups in terms of change was $p = 0.3$. The statistically significant difference between the groups in terms of UP&GO was $p = 0.4$. Patients in both groups have a similar support phase, swing phase, double support, stride length, stride time, and rhythm, including changes after treatment. There was no significant difference in improvements between the groups. In the control group, a significant reduction in total double support and cadence was observed. In the experimental group, a significant increase in stride length and an increase in walking speed were observed. Objective measurements of the outcomes of interval training on the treadmill did not confirm greater significance and better results of spatio-temporal gait parameters compared to the standard rehabilitation program.

Key words: Interval tredmil training, rehabilitation, Parkinson's disease