

INTERVAL TRAINING IN PATIENTS WITH PARKINSONS DISEASE

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Background and Aims

Walking difficulties, characteristic of Parkinson's disease, gave us the goal to apply interval training on a treadmill as an additional exercise program and to compare it with the previous general exercise program, using appropriate standardized functional tests.

Methods

A prospective, experimental, double-blind study was conducted on a sample of 46 patients with an average age of 63.3 ± 9.8 years. The participants were randomly selected and divided into two groups: an experimental group (EG) and a control group (CG). Over a 21-day rehabilitation period, both groups followed the same general kinesitherapy and occupational therapy program lasting a total of 80 minutes. The experimental group additionally participated in a treadmill program consisting of interval training, with 4 minutes of walking at maximum speed followed by 3 minutes of rest, repeated four times. At the beginning and end of the rehabilitation, standardized tests were used for assessment: the UPDRS, Tinetti Balance Scale, Timed Up&Go test, and the 10-meter walk test. The data were statistically analyzed using the chi-square and t-tests.

Results

A significant increase in velocity was observed in the experimental group (D velocity EG = 0.10 ± 0.19 and D velocity KG = 0.04 ± 0.11). UPDRS II, UPDRS III before and after treatment were significantly higher in the control group, but changes were almost identical in both groups, without significance (DUPDRS II $p = 1.0$ and DUPDRS III $p = 0.65$). Tinetti and 10m test were significantly higher in the experimental group before and after treatment, but no significance was observed between groups in terms of change (DTINETTI = 0.31 and D10m_test = 0.643). No significant differences were observed between the groups regarding UP&GO (DUP&GO = 0.439).

Conclusion

For a more valid results, it is necessary to include a more homogeneous and numerous sample and objective measurements of gait with a software program

Keywords: interval, training, treadmill, rehabilitation