

Abstract

This bachelor's thesis verifies the impact of a three-week complex rehabilitation program about upper limb function and quality of life in patients in the subacute phase after a stroke.

The resulting set consists of 32 patients hospitalized in the department of subsequent rehabilitation of the Clinic of Rheumatology and Rehabilitation of the 3rd Faculty of Medicine of Charles University and the University Thomayer Hospital. Gender was balanced at a ratio of 18 men and 14 women. The average age represents 78.13 years for patients.

The evaluation of patients was based on the results of clinical trials. Patients were evaluated before and after a three-week rehabilitation program. National Institute of Health Stroke Scale tests and a modified Rankin scale were selected to evaluate the overall condition of stroke patients. Evaluation of upper limb motor function was assessed on the basis of results from the Nine Hole Peg Test, Action Research Arm Test, measurement of muscle strength with dynamometer and postural tremor accelerometer, limitation of upper limb function in everyday life with Motor Activity Log. The Item Short Form Survey Instrument was chosen to evaluate quality of life.

The assessment of the general condition produced a significant difference for both tests. The National Institute of Health Stroke Scale improved by an average of 2,143 points ($p < 0,0005$) and the modified Rankin scale by 0,660 points ($p < 0,0005$). Evaluation of upper limb motor function in the Nine Hole Peg Test showed a significant difference for the dominant limb. On average, patients improved by 4 seconds ($p = 0.025$). There was an improvement of 6 seconds for the non-dominant limb ($p = 0.189$). The Action Research Arm test for the dominant limb came with an improvement of an average of 5 points ($p = 0.032$), a significant difference. In the non-dominant limb, the result was prone to improvement. Jamar dynamometer measurements of muscle strength did not produce any significant differences in the two upper extremities. The postural tremor assessment does not show changes based

on the accelerometer results. Patient quality of life assessments assessed by the Motor Activity Log and Item Short Survey Instrument tests do not show differences before and after receiving therapy.

Three weeks of complex intensive rehabilitation has a positive effect on upper limb function, but does not affect people's quality of life following a stroke in the sub-acute phase.

Keywords: stroke, upper limb, subsequent rehabilitation, intensive rehabilitation program, clinical trials, quality of life