

Abstract

The department of aftercare was opened this year at the clinic of rheumatology and rehabilitation. This department is focusing on providing comprehensive intensive health care in the fields of rehabilitation and physical medicine, physiotherapy, occupational therapy, clinical speech therapy and clinical psychology in the fields of rehabilitation and physical medicine in a minimum of 4 to 8 hours a day.

The main aim of this study was to verify the effectiveness of this three-week comprehensive intensive rehabilitation program of patients with acquired brain damage.

The study included 7 participants (2 women, 5 men, aged 66.14 ± 19.01 years). 3 participants were excluded from the analyzes due to a short stay in the ward (2 participants left at their own request, 1 participant was dismissed for good health). Four probands were evaluated (1 female, 3 males, aged 55.5 ± 18.76 years, 3 after stroke and 1 with four-chamber hydrocephalus).

Participants of the program were tested in detail before and after the end of the three-week program. Impairment was assessed using the National Institute of Health Stroke Scale and disability using a modified Rankine scale. Upper limb function was tested using the Nine Hole Peg test (fine motor skills), Hand Grip and Pinch Gauge (muscle strength), Action Research Arm Test (rough grip, grip, fine motor skills and gross motor skills of the upper limb), Motor Activity Log, accelerometer (tremor). Momentum was tested with Timed Up and Go and walking tests (10 Meter Walk Test, 6 Minute Walk Test). Self-sufficiency was examined using Functional Independence Measure. The speech therapy examination included a Gugging Swallowing Screen, a Dysarthric Profile, and The Mississippi Aphasia Screening Test. Cognitive functions were tested using the Montreal Cognitive Test and the Symbol Digit Modalities Test. Patients also subjectively assessed quality of life in the SF-36 (36-Item Short Form Health Survey). They also subjectively rated the state of their stability, gait and fine

motor skills on the Visual Analogue Scale (VAS) and set their goals on the Goal Attainment Scale (GAS) and evaluated improvement or worsening.

The most significant improvement after therapy was in the Montreal Cognitive Test, where in the 1st test the average number of points was 20.75 ± 2.95 and in the 2nd test the average number of points was 24.75 ± 3.34 ($p = 0.085$). Probands also improved (trend only indicated) in the National Institute of Health Stroke Scale ($p = 0.260$) and the modified Rankin scale ($p = 0.283$), in the Functional Independence Measure ($p = 0.333$), in the Symbol Digit Modalities Test ($p = 0.434$), in tests for fine and gross motor skills of the upper limb Action Research Arm Test ($p = 0.480$), Dynamometer - Pinch Gauge (key PHK $p = 0.209$, key LHK $p = 0.348$, tweezers PHK $p = 0.375$, tweezers LHK $p = 0.367$, pinch PHK $p = 0.309$, pinch LHK $p = 0.328$), in Timed Up and Go walk tests ($p = 0.115$), 10 Meter Walk Test (normal speed $p = 0.276$, maximum speed $p = 0.413$), 6 Minute Walk Test ($p = 0.133$), in the Berg Balance Scale stability test ($p = 0.377$) and in The 36-Item Short Form Health Survey ($p = 0.289$), Motor Activity Log ($p = 0.416$), Fatigue Scale for Motor and Cognitive Functions ($p = 0.393$). They also showed a slight improvement in speech therapy tests Gugging Swallowing Screen ($p = 0.465$), 3F - Dysarthric profile ($p = 0.479$), in measuring the degree of tremor (PSDmax) (open eyes PHK $p = 0.199$, open eyes LHK $p = 0.175$, closed eyes PHK $p = 0.481$, eyes closed LHK $p = 0.074$) and in the subjective evaluation of the Visual Analogue Scale (walking $p = 0.379$, fine motor skills $p = 0.446$). In the fine motor test Nine Hole Peg Test (PHK $p = 0.325$, LHK $p = 0.399$) and in the measurement of compression force (9 cm PHK $p = 0.414$, 9 cm LHK $p = 0.350$, 12 cm PHK $p = 0.421$, 12 cm LHK $p = 0.499$, 14.5 cm PHK $p = 0.454$, 14.5 cm LHK $p = 0.376$, 17 cm PHK $p = 0.481$, 17 cm LHK $p = 0.323$, 20 cm PHK $p = 0.449$, 20 cm LHK $p = 0.360$) on the contrary, a deteriorating trend is indicated.

The three-week comprehensive rehabilitation program led to an improvement in a number of examined parameters, but the changes were not significant.

Key words: stroke, hydrocephalus, comprehensive intensive rehabilitation program, aftercare, multidisciplinary rehabilitation team, acquired brain damage