

## **Abstract:**

This Master's thesis focuses on Occupational therapy for patients after application of botulinum toxin to upper limb. The aim of the thesis was to evaluate and compare a progress of functional independence in patients after acquired brain injury.

There were twenty patients involved in the research, who were further divided into two groups and separated by ten people in each group. Both groups underwent the application of botulinum toxin whereas the experimental group A went through the occupational therapy. The control group had ordinary rehabilitation at home and without any occupational intervention for the duration of twelve week under guided self-rehabilitation contract of spastic paresis, so-called GSC. A programme of the group A included over the counter rehabilitation outpatient occupational therapy. The patients attended the course twice a week for the duration of four weeks. Afterwards, they received a home programme for the duration of eight weeks, during which they had two examinations at occupational therapy.

All the participants were evaluated by Global Subjective Self-Assessment which is focused on spasticity. There were further evaluated according to Functional Independence Measure and modified Frenchay Arm Test. The experimental group with outpatient occupational therapy was evaluated according to Canadian Occupational Performance Measure. On the basis of these results, the targets and the plans were further determined.

By comparing a progress of individual testing, the research has shown a significant improvement in the variance of values of the experimental group with occupational therapy in the upper limb motor function. The measured p-values of significance of the group were statistically higher in input and control examination (0,001), and between input and output examination (0,006). There was not any significant difference during the control and the output examination process between the two groups (0,492). The improvement difference of both groups was statistically significant in favour of the experimental group. As well as for the subjective self-assessment of spasticity. The measured p-value of significance was statistically higher in input and control examination (0,017) and further between input and output examination (0,001). Furthermore, no difference of values has occurred during control and output examination (0,234). In comparison with the data of functional self-sufficiency no significant difference between the groups was found (0,115). This research has proven that botulotoxin together with occupational therapy shows potentially better results in adult patients after acquired brain injury.

**Key words:**

Botulinum toxin, adult patient, Occupational therapy, spasticity, acquired brain injury