

ABSTRACT OF BACHELOR THESIS

Author: Michaela Kindlová

Supervisor: Mgr. Jakub Pětioký

Title of bachelor thesis: Screening of Individual Physiotherapeutic Unit in Patients with Central Hemiparesis Focused on the Time Subsidy of Individual Physiotherapy and Repetition of Movements on the Individual Segments of Upper Limb during the Physiotherapy.

Abstrakt of bachelor thesis:

An aim of a thesis is screening of individual conventional physiotherapeutic units and robotic-assisted rehabilitation. The screening of ergotherapy units was also included for a more comprehensive picture. The bachelor thesis is focused on upper limb therapy and the aim is to compare the intensity of the conventional therapy lead by therapist and intensity of robotic assisted rehabilitation lead by robotic system. Specifically, the time spent on upper limb training during therapy and the number of repetitive movements in each segment of the upper limb was compared.

The bachelor thesis consists of two parts, theoretical and practical. In the theoretical part, which is written in the form of a literary research, the issue concerning a stroke disease is summarized. This includes, for example, etiopathogenesis, incidence of disease, stroke distribution, clinical picture and classical rehabilitation options such as Bobath's concept or Proprioceptive neuromuscular facilitation (PNF). Furthermore, the theoretical part deals with the intensity of therapy after stroke. Possibilities of high-intensity therapy and robot-assisted rehabilitation is as well mentioned.

The practical part, which was created using the observation of therapy, contains the interpretation of acquired data, which are processed by means of excel tables and graphical representation. At the same time, the practical part is supplemented by a case report of one of the patients, so that the work is extended by the therapeutic experience of working with the patient. The case study includes a detailed history, complete kinesiological analysis, the design and implementation of therapy, a short-term and long-term plan, and the conclusion of a review of the therapy summary.

Key words: robot-assisted therapy, neuroplasticity, rehabilitation after stroke, intensity of therapy, upper limb

