Abstract

The electrical stimulation (ES) according to Jantsch was created with a primary aim to reduce spasticity, however its impact has been neither proved nor disproved by any study. Therefore, the aim of the thesis is to find out if this type of the ES can reduce spasticity of m. triceps surae within the patients with multiple sclerosis (MS). Apart from the spasticity, there was as well observed the influence of the ES on an active movement performed by the antagonists of spastic muscle and the walking speed. Fifteen probands participated in our pilot controlled non-randomized study, probands were divided into two groups – first with the application of the ES (STIM) and second without the application of the ES (NOSTIM) during the hospitalization. We used the concept of Jean-Michel Graciese – Five-step clinical assessment in spastic paresis during the examination process. From this protocol, we choose Tardieu scale to measure spasticity, examination to measure active range of motion and 10MWT. Furthermore, TUG was added. The measurements took place on the 1st, 4th and 8th day of the hospitalization. The intragroup difference was evaluated by the ANOVA for repetitive measures with Fisher´s post-hoc test and the level of importance $p=0.05$. From acquired data it follows that the ES according to Jantsch has an immediate influence on the reduction of the spasticity and the increase of an active movement of the antagonist of spastic muscle. Furthermore, this effect has lasted throughout the whole hospitalization and it had the increasing tendency. The increase of speed of walk by using the ES was not proved. Through a questionnaire it was found out that the ES by Jantsch was evaluated positively by the probands.