Abstract

Thesis title: Stimulation of the zones used during reflex lokomotion by the TENS

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The aim of the thesis: The aim of this thesis is to determine, whether is activated the appropriate locomotor pattern during Vojta reflex locomotion - reflexive crawling, when TENS is used for a stimulation of trigger zones, as it is during manual stimulation of trigger zones for reflexive crawling.

Method: The essence of this study is the stimulation of trigger zones used in the reflex locomotion manually and by transcutaneous electrical nerve stimulation (TENS) at a frequency of 30 Hz and 182 Hz. Six probands participated in this experiment. During the manual and TENS stimulation was scanned electrical activity in selected muscles by surface electromyography. First, it was evaluated the order of activation of selected muscles, using "standard timing" analysis by MyoResearch XP Master program. Second, it was evaluated the crawling reflex locomotion pattern visually.

Results: It was confirmed, that the crawling reflex locomotion pattern, which is provoked by manual stimulation of trigger zones, is provoked by TENS stimulation as well, using the same trigger zones. It follows that the vector of direction and pressure during manual stimulation of trigger zones is not necessary for recall of the crawling reflex locomotion pattern. It was also found that the stimulation of thoracic zone manually and using the TENS as well provoke a similar order of activation of selected muscles for each proband. During the stimulation of heel zone is the order of activation completely individual.

Keywords: divelopmental kinesiology, reflex crawling, trigger zones, transcutaneous electrical nerve stimulation