

Title of bachelor's thesis:

Physiotherapy of Walking in Parkinson's Disease Patients Using Visual and Auditory Cues

Abstract:

This bachelor's thesis investigates Parkinson's disease and the possible effects of physiotherapeutic intervention on gait. The applied gait therapy consists in the use of cueing strategies in which movement can be controlled directly by the cerebral cortex, excluding the activity of the disturbed basal ganglia.

The thesis includes a theoretical and a practical part. The theoretical part, which is divided into chapters, gives a summary of general information about Parkinson's disease, of the possible physiotherapeutic treatment of particular symptoms, and a detailed outlook on the possibilities and benefits of using cueing strategies in gait therapy. The practical part aims at verifying the theoretical knowledge through applying cueing therapy on patients. The results are recorded in two case reports in either of which a different type of external stimulation has been used (visual, auditory). For an objective evaluation of the effects of both therapies (changes of gait parameters), functional tests (Ten Meter Walk Test, Emory Functional Ambulation Profile) and gait analysis by the GAITRite system have been used. The recorded results have been compared with each other and with the conclusions of other available studies.

The thesis' aim is to verify the positive effects of cueing on gait parameters and to compare the differences between the immediate effect, the medium-term effect and the effect achieved by long-term training.

Key words: physiotherapy, Parkinson's disease, walking, visual cues, auditory cues, cueing strategies