

Title: Effect of application of botulotoxin for change of gait in patients after brain damage with spastic dystonia

Abstract:

The theme of this bachelor thesis is verifying possibilities of botulinum toxin influencing the gait stereotype of patients with spastic dystonia. The thesis consists of theoretical and practical parts.

The theoretical part consists of research of relevant literature sources, based on which basic terms of the associated range of problems are briefly defined: muscle tone, spasticity, spastic dystonia, botulinum toxin and gait. Part of the theoretical summary also includes scales that describe muscle tone (Ashworth scale, Tardieu scale, Five-step clinical assessment by Gracies) and also tests evaluating gait stereotype (Tinetti Gait and Balance Examination, 10 Meter Walk Test, 2 Minute Walk Test, Timed Up and Go, Rivermead visual assessment of the gait).

The practical part contains two case reports of patients suffering from spastic dystonia who were monitored during one cycle of the application of botulinum toxin. Degree and nature of spasticity of these patients were measured at equal intervals and then, using the selected tests, the gait stereotypes were compared at various stages of effect of botulinum toxin. Based on the obtained results, effect of this substance on gait stereotype were evaluated.

Key words: muscle tone, spasticity, spastic dystonia, botulinum toxin, gait stereotype, gait evaluation