

Outcome of functional motor disability in ankle dorsiflexion in children with cerebral palsy following Botulinum toxin A injection

Wadugodapitiya S. I

University of Peradeniya, Sri Lanka

Cerebral palsy (CP) is one of the most crippling conditions in childhood causing severe physical disability. Spastic paresis is the most common form of CP. Spasticity affects the child's gross motor skills. For many years treatment for muscular skeletal abnormalities due to spasticity, centered on physical therapy. Recently botulinum toxin – A (BTX-A) has opened a new avenue to provide an effective, short term intervention to reduce spasticity in specific muscle groups. This study aimed at assessing the outcome of functional motor disability in ankle dorsiflexion in children with CP who are having spastic diplegia following botulinum toxin A (BTX-A) injection. Ten children with CP who are having spastic diplegia, who had received BTX-A injection to gastrocnemius-soleus group of muscles were taken for this study. They have undergone a course of physiotherapy treatment following BTX-A injection. The main outcome measures were range of motion of affected joints, muscle tone, gait pattern and selective motor control of dorsiflexion. These children were assessed before the injection and 3 months post-injection. Muscle tone ($p=0.035$), range of motion of both right and left ankle dorsiflexion ($p=0.001$, $p=0.002$) showed a statistically significant improvement. There is a marked improvement in selective motor control of dorsiflexion ($p=0.016$). In the physician rating scale for gait there was a significant improvement in the timing of heel rise in the gait cycle ($p=0.089$). The study shows that BTX-A injection to gastrocnemius-soleus group of muscles decreases the spasticity and improves the functional ability of ankle and foot in children with cerebral palsy.

Biography

Ms.S.I.Wadugodapitiya has completed her Bachelor of Physiotherapy degree at the age of 25 (2007) from Rajiv Gandhi University of Health Sciences, Bangalore, India. She is currently pursuing M.Phil. in the Faculty of Medicine, University of Peradeniya, Sri Lanka on management of Cerebral Palsy with the combined management of BTX-A injection and physical therapy. She works as a Lecturer in the Department of Physiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka.

shelly_su@yahoo.com