소아재활

게시일시 및 장소 : 10 월 19 일(토) 08:30-12:30 Room G(3F)

질의응답 일시 및 장소 : 10 월 19 일(토) 11:00-11:30 Room G(3F)

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The effect of chemodenervation in lower limb on gross motor function in children with cerebral palsy

Eun Sook Park[1*†], Ja Young Choi[2], Seung Ki Kim[1]

Severance Hospital, Department of Rehabilitation Medicine[1], Chungnam National University Hospital, Department of Rehabilitation Medicine[2]

Objectives
As for lower limb spasticity in children with spastic cerebral palsy, chemodenervation has been regarded as safe and effective tool for the reduction of spasticity. The aim of this study is to find out the targeting age and muscles for the injection and the efficacy of the injection in gross motor functional gain according to GMFCS (Gross Motor Function Classification System) in the children with spastic cerebral palsy.

Design
a single center retrospective study

Participant and Methods
Medical records were searched from January 2006 to January 2017. The children with spastic cerebral palsy who had injected with botulinum toxin injection until December 2016 were selected. The children who had not assessed at least 2 times after injection and whose age at injection was over 13 years old were excluded and thus 919 times of 591 children were recruited for this study.

Results
The injection was predominantly done under the age of 6 years. The calf muscles for dynamic foot deformity was the most common muscles for all age groups. The injection into knee flexor muscles was most commonly performed for the children aged from 4 to 6 years. The distal injection was mainly performed for high function children whereas proximal injection was mainly done for low functioning children. The multilevel injection was mostly done for the children at mid-functioning children. Cast application after injection was significantly higher in the children aged from 4 to 6 years group. The GMFM was significantly increased after injection for both high and low functioning groups. Younger age at injection and distal injection type were related to higher GMFM gain in both short and mid-term follow up.

Conclusion

The chemodenervation and combined cast application differ based on age. The targeting muscles for the injection varied depending on gross motor functioning and age. The age at injection and injection type was significant factors relating to the changes in GMFM.