conferenceseries.com

2nd International Conference and Expo on
Novel Physiotherapies
June 09-11, 2016 London, UK

The relationship between plantar flexor spasticity and swing phase of gait cycle in children with hemiplegic cerebral palsy

Orhan Öztürk[1], **Zübeyir Sari**[1], **Yasemin Kala**[2], **Hüseyin Bol**[2], **Onur Aydogdu**[1] and **Mine Gülden Polat**[1]
[1]Marmara University, Turkey
[2]Turkey Spastic Children's Foundation, Turkey

Background: Gait cycle consist of two main periods which are stance phase and swing phase. Swing phase is, in average, 40% of the gait cycle. Prolonged swing period leads contralateral limb to carry more weight than normal and that causes to occur secondary problems in children with hemiplegic cerebral palsy (CP) in later periods. Our aim in this study is determination of the relationship between plantar flexor spasticity and duration of swing phase of gait cycle in children with hemiplegic CP.

Method: 20 children (mean age: 7.3±1.89 years, 10 girls, 10 boys) who are matching with classification of hemiplegic pathologic gait Type 1 and Type 2 made by Winters an al. recruited in this study. Firstly, 3-D gait analysis was made and then plantar flexor spasticity was evaluated. The correlation between plantar flexor spasticity and swing phase duration was analysed with Spearman Test.

Result: The affected limb swing phase in gait cycle was, in average, 57.19±7.37% in children with hemiplegic CP recruited to study. According to analysis, there was a positive statistically significant correlation (p: 0.011) between plantar flexor spasticity and swing phase duration of affected limb.

Discussion: It thought that asymmetrical limb loading due to plantar flexor spasticity caused alteration of proportion of gait cycle phases. The body weight was mainly supported by unaffected lower limb in hemiplegic CP and thus, it took longer time to transfer the body weight from unaffected side to affected side. This asymmetrical limb loading should be taken into account while planning rehabilitation programme and also the exercise should be done to gain symmetrical limb loading. Long term follow-up will give an opportunity to determine secondary problems of this situation in future.

Biography

Orhan Öztürk has completed his graduation from Trakya University Health Science Faculty in 2013. He is currently pursuing his Master's degree program in Marmara University Health Science Institute.

fzt.orhanozturk@gmail.com

Notes: