

## **The effects of electrical stimulation on the H-reflex, F-response and muscle hypertonus in children with hemiplegic cerebral palsy (CP).**

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**Introduction** This study was planned to search the effects of electrical stimulation on the H-Reflex, F-Response and muscle hypertonus in children with hemiplegic CP.

**Methods:** 16 children (8 boys and 8 girls) who suffered from hemiplegic CP were included in this study. The average of age of the subjects was  $6.25 \pm 2.89$  years. All the subjects were treated with Bobath therapy plus tetanic Faradic stimulation (TFS). TFS was applied on the tibialis anterior muscle, on the affected side. The subjects received TFS during five weeks (four days a week, 20 minutes). The effects of TFS on H- reflex, F and M responses of the m. gastro-soleus on affected side were evaluated using electromyography. Modified Ashworth scale was used so as to evaluate muscle hypertonus.

All the data obtained from this study was calculated using SPSS for WINDOWS' 98 version.

**Results:** At the end of the study, after TFS we observed a decreasing in spasticity according to the modified Ashworth scale ( $p < 0.001$ ). In the other hand there was no significant difference about H- Reflex, F and M responses of the gastro-soleus muscle between affected and unaffected sides ( $p > 0.05$ ).

**Conclusion** The use of TFS in non-spastic muscle (m. tibialis anterior) did not provide any difference H- reflex. F and M responses of the spastic muscle in children with hemiplegic CP.