KNEE-ANKLE-FOOT ORTHOSIS TREATMENT IN CHILDREN WITH SPASTIC CEREBRAL PALSY

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Children with spastic cerebral palsy often develop reduction in ankle-foot dorsiflexion range of motion due to a shortened or stiffer m. gastrocnemius. This results in impaired gait. A knee-ankle-foot orthosis worn at rest is commonly prescribed in clinical care. Very little is known regarding the efficacy of wearing a knee-ankle-foot orthosis at rest and whether the assumptions regarding the underlying working mechanisms are correct. The aim of this thesis is to quantify potential effects of treatment with knee-ankle-foot orthoses over time in children with spastic cerebral palsy. In addition, it is aimed to investigate whether parent reported knee-ankle-foot orthosis wearing time can be considered as a valid indicator and it is aimed to assess effects of affected ankle-foot dorsiflexion range of motion on gait kinematics in children with cerebral palsy.