

ABSTRACT

A new unilateral abduction orthosis for Ponseti-treated clubfoot: A cohort study to assess compliance (*Prosthetics and Orthotics International* 1-6)

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- ▶ **Background:** The Ponseti method for treating congenital talipes equinovarus requires an orthosis to maintain correction after manipulation and casting, typically the 'boots and bar'. Non-compliance with the orthosis increases the risk of recurrent deformity. This study investigates a new orthosis, the abduction dorsiflexion mechanism.
- ▶ **Objectives:** The aim of this study is to assess compliance of the abduction dorsiflexion mechanism when used at night and maintenance of foot morphology.
- ▶ **Study design:** This study is a cohort study.
- ▶ **Methods:** A total of 10 children with unilateral congenital talipes equinovarus previously treated with Ponseti casting were recruited to trial the abduction dorsiflexion mechanism at night for 12 weeks. Foot morphology and compliance were assessed every 4 weeks.
- ▶ **Results:** Participant families were pleased with the orthosis, opting to continue to use the device following conclusion of the trial. Compliance was good and no deterioration in Pirani score or dorsiflexion seen. Abduction improved during the trial. The incidence of skin problems was equivalent to that experienced with the traditional boots and bar that the children had been wearing.
- ▶ **Conclusion:** Good compliance and parental satisfaction, coupled with no deterioration in foot morphology, abduction or dorsiflexion present the abduction dorsiflexion mechanism boot as a feasible alternative to the traditional boots and bar, particularly in children with unilateral congenital talipes equinovarus.
- ▶ **Clinical relevance:** The abduction dorsiflexion mechanism is currently the subject of considerable interest as clinicians look to increase compliance and reduce the recurrence rate in Ponseti-treated congenital talipes equinovarus. The abduction dorsiflexion mechanism boot is a feasible alternative to the traditional boots and bar, particularly in children with unilateral congenital talipes equinovarus.
- ▶ The full study can be obtained at <https://www.ncbi.nlm.nih.gov/m/pubmed/30557091/>