E-Poster

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Pedobarographic Findings in Morrocan Children With Cerebral Palsy and the Effectiveness of Ankle-Foot Orthoses (AFO)

Topic: Specific Target Groups (Children, Women, Elderly, Athletes, Musicians, Refugees, Ethnic Groups, Workers, and Others)

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BACKGROUND

Cerebral palsy (CP) is defined as motor impairment caused by non-progressive brain damage in an immature brain. Cerebral palsy is the leading cause of motor disability in children with neurological pathology, and foot deformities are almost constant in cerebral palsy. Our aim was to estimate the prevalence of foot deformities according to age, gender, CP subtype and overall motor function, and to analyze the effectiveness of orthotics on these orthopaedic complications.

METHODS

This is a prospective study carried out over three years, including 62 children suffering from CP aged between 4 and 17 years, who underwent a podological assessment using a podoscope with tangential lighting and a pedograph, statically and dynamically, in the PM&R department of the CHU Ibn rochd in Casablanca. Global motor function was graded using the Global Motor Function Classification System (GMFCS).

RESULTS

The mean age was 10.38 years, with a predominance of males (61.3%) and the spastic form accounted for 93.54%. The main sites of pain were the feet (79%) and hips (62%). The four most common deformities were equinus (51.6%), equinovarus (33.8%), planovalgus (25.8%) and cavovarus (9.7%). The pedographic evaluation revealed increased pressures in the forefoot (79%) and in the hindfoot (46.7%). The frequency of foot deformities exhibited a marked increase from 33.8% in GMFCS level I to 66.1% in level III, with a higher prevalence observed among older age groups, and no significant difference between male and female participants. In terms of management, ankle-foot orthoses (AFOs) were most commonly prescribed. Subsequent follow-ups revealed that an adapted orthosis yielded positive outcomes, enhancing walking speed, cadence, and stride length in 66.1% of cases. The findings of this study indicates that correcting foot deformities with adjustable AFOs is an effective treatment for in children with cerebral palsy.

CONCLUSION

Given that four out of five children suffer from foot/lower leg pain and all subjects had foot deformities, it is essential to identify, assess and treat these individuals early in order to preserve their function and prevent deterioration in their mobility and quality of life.

Statement of Disclosures

None

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