

Making Assistive Technology and Rehabilitation Engineering a Sure Bet

Impact of a New Dynamic Pedorthosis on the Clubfoot Function

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ABSTRACT

A customized dynamic pedorthosis has been developed in our institutions that may be able to prevent recurrence of the treated clubfoot [1]. This new pedorthosis was developed using OrthoticPro™, a software package that utilizes dynamic plantar pressure data, and computer aided engineering tools. The pedorthosis is constructed using rapid prototyping technologies (RP). However, the effectiveness of this custom pedorthosis for ambulating children remains to be investigated. The purpose of this research was to: 1) compare the pressure metrics between barefoot in regular shoes and the pedorthosis, and 2) quantify the deviation of the center of pressure (COP) trajectory from the normal trajectory with and without the use of the pedorthosis.

KEYWORDS

Dynamic orthotic, computer modeling, FEA, center of pressure, clubfoot

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