Prospective evaluation of the use of Mitchell shoes and dynamic abduction brace for idiopathic clubfeet.

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Abstract

Ponseti treatment for clubfoot has been successful, but recurrence continues to be an issue. After correction, patients are typically braced full time with a static abduction bar and shoes. Patient compliance with bracing is a modifiable risk factor for recurrence. We hypothesized that the use of Mitchell shoes and a dynamic abduction brace would increase compliance and thereby reduce the rate of recurrence. A prospective, randomized trial was carried out with consecutive patients treated for idiopathic clubfeet from 2008 to 2012. After casting and tenotomy, patients were randomized into either the dynamic or static abduction bar group. Both groups used Mitchell shoes. Patient demographics, satisfaction, and compliance were measured with self-reported questionnaires throughout follow-up. Thirty patients were followed up, with 15 in each group. Average follow-up was 18.7 months (range 3-40.7 months). Eight recurrences (26.7%) were found, with four in each group. Recurrences had a statistically significant higher number of casts and a longer follow-up time. Mean income, education level, patient-reported satisfaction and compliance, and age of caregiver tended to be lower in the recurrence group but were not statistically significant. No differences were found between the two brace types. Our study showed excellent patient satisfaction and reported compliance with Mitchell shoes and either the dynamic or static abduction bar. Close attention and careful education should be directed towards patients with known risk factors or difficult casting courses to maximize brace compliance, a modifiable risk factor for recurrence.

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