

Return to Activity After Flatfoot Reconstruction

Introduction

Surgical flatfoot reconstruction is a relatively common operation for stage IIB adult acquired flatfoot, especially in a more active population. However, this imparts a recovery period of up to a year. Recent literature from the military population has shown that return to full duty without restriction occurs at a very low rate after this surgery, especially when a lateral column lengthening is employed. The goal of this study was to evaluate the return to activity after flatfoot reconstruction by 1) collecting return to activity data on patients who have undergone the procedure and 2) evaluate patient characteristics to evaluate which patient population has the best return to activity.

Methods

A chart review of all patients who underwent flatfoot reconstruction with a lateral column lengthening from 2011-2014 was conducted to create an institutional database. All patients were a minimum of 2 years out from their procedure in order to account for the expected recovery and rehabilitation period. These patients were contacted via telephone, and we administered the Foot and Ankle Ability Measure (FAAM) Activities of Daily Living (ADL) survey, as well as the FAAM Sports survey. Final scores were tabulated and evaluated for activity level. Patient demographics, clinical and radiographic features were evaluated as predictors of their outcome scores and associated with levels of return to activity parameters. Two sample t-tests were utilized to assess for a difference in ADL and sports scores.

Results

A total of 43 patients met inclusion criteria as having had a flatfoot reconstruction with lateral column lengthening during the time period. All of these patients were attempted to be contacted

using the contact information listed on the chart. A total of 20 patients were able to be reached via this contact information, and 18 agreed to participate and answer the survey questions. The age range of respondents was 18-71 years old. Fourteen (77.8%) of them were female and 4 were male. The average FAAM ADL score was 86.3, and the average FAAM sports was 71.7. Those patients with BMI of 30 or greater had a lower average ADL score ($P=0.042$) and sports score ($P=0.063$) compared to those patients with a BMI < 30, respectively. Patients with pre-operative hindfoot valgus of 10 degrees or higher had a post-operative ADL score of 92.0 and a sports score of 81.6, compared to 80.7 ($P=0.074$) and 61.8 ($P=0.055$) in those patients with hindfoot valgus < 10 degrees, respectively. Patients age yielded no significant difference in these functional scores.

Discussion

Overall, patients having undergone flatfoot reconstruction with lateral column lengthening have relatively high average foot and ankle ability measure scores in both the activities of daily living and sports category. This suggests that their return to function is better after this surgery than some of the previous literature would suggest. This study found that those with a BMI < 30 had improved function than those with higher BMI. There was a trend towards improved return to activity and function in those with worse pre-operative hindfoot valgus (10 degrees or greater), though did not fully reach statistical significance. Age was not associated with post-operative function in this patient population. Further study is required with greater patient numbers to delineate these differences.