Untreated Congenital Vertical Talus Deformity in Walking Age: Minimally Invasive Method works

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INTRODUCTION: There is sparse literature evaluating the outcomes in toddlers with Congenital Vertical Talus (CVT) deformity who undergo treatment with the recently introduced minimally invasive Dobbs Method. We present the first study of this patient cohort with the aim of determining the efficacy of this method in patients 18 months of age and older.

METHODS: A list of all patients over 18 months of age who underwent CVT correction at our institution was created. Retrospective chart review, including review of preoperative, immediate postoperative and most recent radiographs (figures 1 and 2) was performed. All follow-up notes were reviewed for clinical outcomes and complications. Eligible patients completed Patient-Reported Outcome Measurement Information System (PROMIS) questionnaires. Statistical analysis was performed using an alpha of 0.05.

RESULTS: 24 feet met all inclusion criteria and were included in the final analysis, 13 (54.2%) of which belonged to patients with non-isolated CVT (table 1). Initial radiographic correction of all measured angles was seen, but by the latest follow-up the average lateral TAMBA had increased from 12.04 degrees immediately postoperatively to 28.8 degrees at the latest follow-up (p=.0012) (table 2). There were no statistically significant differences between patients with idiopathic and syndromic CVT in the average radiographic angles at any of the measured time points (table 3). Radiographic recurrence of deformity was seen in 9 (37.5%) feet (table 4) and additional unplanned surgery was required in 3 (12.5%) feet. Residual radiographic pes planus was seen in 5 (20.8%) feet. PROMIS pain interference and peer relationship scores were near the population mean.

DISCUSSION AND CONCLUSION: Although the recurrence rate in this patient population seems to be higher than that of younger patients, the majority of toddlers who undergo treatment with this method do experience successful outcomes. We recommend attempting this treatment method in toddlers before performing extensive soft tissue releases or salvage procedures.