ABSTRACT

**Background:** Ankle injuries account for up to 40% of all sport related injuries. These injuries can result in weeks to months of missed sport or work. The PRICE (Protection, Rest, Ice, Compression, Elevation) treatment is standard care for most acute ankle sprains. Recently, early mobilization in adults has been shown to decrease time off from sport or work, and the likelihood of developing chronic instability. To date, no research has been performed assessing the effectiveness of early mobilization in pediatric patients (<18 years). Purpose: There were two objectives of this study: (1) to determine if early ankle joint mobilization using elastic band traction is effective and (2) assess the occurrence of adverse events with this technique in the pediatric population.

**Methods:** Patients with an acute ankle sprain of <7 days referred to physical therapy were randomly assigned to receive early mobilization or PRICE. Early mobilization was performed using a stretch band ankle traction technique. Both groups received a standardized rehabilitation program. Pain, edema, ankle strength using hand-held dynamometry, and Foot and Ankle Disability Index (FADI) were measured at both initial evaluation and at discharge. The number of days before return to sport and the number of treatment sessions were also variables of interest.

**Results:** Forty-one pediatric patients were recruited for participation (mean age 14.6 ± 1.9 years). Both treatment groups had clinically significant improvements in pain, edema, strength, and FADI scores. No significant differences in outcomes were noted between treatment groups. Mean number of days for return to sport for the PRICE group was 26.33 ± 7.14 and the early mobilization group was 26.63 ± 14.82, the difference between groups was not significant (p = 0.607). The number of total visits for the PRICE group of 8.07 ± 2.63 and the early mobilization groups of 8.5 ± 1.57, was also not statistically significantly different (p = 0.762). There were no reported adverse events with early mobilization.

**Conclusion:** Early mobilization appears to be a safe intervention in pediatric patients with an acute ankle sprain. Early mobilization resulted in similar outcomes when compared to traditional PRICE treatment. A high drop-out rate in both treatment groups was a limitation of this randomized trial.

**Level of evidence:** 1b

**Key words:** Ankle sprain, pediatric, mobilization