Comparative study of calcaneal lengthening osteotomy and Grice-Green arthrodesis for the treatment of spastic pes planovalgus in patients with cerebral palsy

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My disclosure is in the Final AOFAS Program Book. I have no potential conflicts with this presentation.
✓ The aim of this study is to present the results of calcaneal lengthening osteotomy and Grice-Green extra-articular subtalar arthrodesis performed in children with spastic pes planovalgus owing to cerebral palsy and to compare their effectiveness in the radiographic realignment of the foot.
Materials and Methods

✔ Two comparison groups were retrospectively formed out of the patients in whom calcaneal lengthening osteotomy (16 feet of 10 children) and subtalar extra-articular arthrodesis (16 feet of 11 children) were performed.
The patients were evaluated preoperatively, postoperatively, and during the last visit. Seven valid radiographic parameters were used to evaluate the realignment of the foot.
Paired t-test was used for binary comparison in paired groups. The effectiveness of the surgical technique on the radiographic results was evaluated by performing repeated measures analysis from general linear models.
Results

- In the last visit, both groups showed significant correction ($p<0.05$) in all radiographic parameters.
- A significant better correction of the anterior talocalcaneal angle and the talonavicular coverage angle was achieved in the subtalar arthrodesis group ($p<0.05$).
- There was no significant difference between the two techniques for the rest five parameters.
Conclusion

☑ In this study, the subtalar extra-articular arthrodesis technique was superior in the radiographic realignment of the foot compared to calcaneal lengthening osteotomy.

☑ The Grice-Green arthrodesis technique is still a valuable method for the treatment of spastic pes planovalgus in children with cerebral palsy.
References


