

Is it necessary to fix the Akin osteotomy in the minimally invasive hallux valgus correction? Prospective randomized controlled trial with a minimum follow-up of two years

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Introduction: The need for fixation of Akin osteotomy associated with minimally invasive hallux valgus correction remains controversial.

Methods: Consecutive patients undergoing minimally invasive hallux valgus correction with Akin osteotomy were randomized to two treatment arms. Outcomes were collected before the procedure and at the final assessment (at least 2 years later). Pre-versus-post comparisons were performed using a paired t-test or a Wilcoxon test, according to the distribution of paired differences (two-tailed alpha = 0.05).

Results: Forty-six [AC1] participants (23 in group 1, 22 in group 2) were included; pain (VAS) decreased from a median of 7 to 0 ($p < 0.001$), and the AOFAS score increased from 60.5 ± 8.3 to 93.2 ± 7.4 ($p < 0.001$). Radiographic correction was significant: HVA decreased from 32° to 6° ($p < 0.001$) and IMA from $14.3 \pm 2.9^\circ$ to $6.6 \pm 1.8^\circ$ ($p < 0.001$). The IMA showed no statistically significant change ($7.6 \pm 4.4^\circ$ to $9.8 \pm 6.0^\circ$; $p = 0.059$). In the final evaluation, consolidation of Chevron and Akin was observed in all cases. The mean follow-up was 31.2 months.

Conclusion: In this prospective randomized controlled trial, there was significant clinical improvement and sustained radiographic correction at the end of two years, with high consolidation and satisfaction rates.

Keywords: Hállux valgus; Osteotomy; Minimally invasive surgical procedures.

DOI: <https://doi.org/10.30795/jfootankle.2026.v20.2079>

This abstract was presented at the XXII Brazilian F&A Meeting 2026, held in São Paulo, Brazil, from April 18 to 21, 2026.