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## **Distal phalanx osteotomy in hallux deformity. Our clinical experience**

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### **ABSTRACT**

**Introduction:** There are many techniques to correct the hallux deformity. Most of them include metatarsal and/or phalanx osteotomies. Akin osteotomy of the proximal phalanx is used to correct the distal articular set angle or the interphalangeal angle. However, indications for distal phalanx osteotomy remain unpublished. The aim of this study is to prove the benefit of performing an osteotomy on the distal phalanx in some cases to correct hallux deformities.

**Methods.** We report 9 cases in which osteotomy of the distal phalanx was performed to correct the hallux deformity. Radiographic measurements were performed on standing dorsoplantar radiographs to analyze the distal articular set angle, interphalangeal obliquity, interphalangeal angle, and metatarsophalangeal angles. The cases are described. The surgical technique was performed by minimal incision surgery using fluoroscopy. The clinical results were evaluated by the VAS and the AOFAS forefoot scale. The mean follow-up was 92 months.

**Result:** The clinical results for all the patients were excellent, pain was relieved and deformities were corrected. The DASA, interphalangeal obliquity, interphalangeal angle and F2-metatarsophalangeal angle were rectified. The patients were highly satisfied with both the aesthetic and functional results. Only three cases have been performed within the last two years, and long-term results remain to be evaluated. However, over a 10-year follow-up, the correction made in the remaining five cases has persisted.

**Conclusion:** Correction of a Hallux Valgus deformity can be achieved with an osteotomy of the proximal phalanx. In cases with valgus deviation in the distal phalanx, a corrective osteotomy of F2 alone or associated with osteotomy of the proximal phalanx should be considered.

**Keywords:** Hallux valgus; Hallux deformity; Phalangeal osteotomy; MIS osteotomy.

