Metatarsophalangeal arthrodesis for hallux valgus treatment

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ABSTRACT

Introduction: Hallux valgus is the most common deformity of the adult foot and is often highly debilitating, especially when severe. First metatarsophalangeal arthrodesis (FMTPA) is a reliable method of hallux valgus correction, with a high success rate and a low relapse rate. This study assesses the union rate and degree of satisfaction and compares the pre- and postoperative American Orthopedic Foot and Ankle Society (AOFAS) scale scores of patients subjected to FMTPA for hallux valgus treatment. This study is a retrospective review of 29 feet that underwent FMTPA fixed with crossed 1.5-mm Kirschner wires, with or without cerclage. Union was assessed radiologically and clinically.

Methods: From March 2011 to April 2018, 23 patients diagnosed with hallux valgus underwent surgery using the FMTPA technique fixed with crossed Kirschner wires. One patient died of unrelated causes, and another was not located for the review, leaving a total of 21 patients for the analysis (29 feet). Eight patients were operated on bilaterally, 6 underwent operation of the right foot, and 7 underwent surgery of the left foot. The mean follow-up was 32 months (7-94 months), and the mean age at the time of surgery was 69 years (45-88).

Results: The AOFAS score improved from a mean of 26.8 points before the surgery (10-55) to a mean of 77.6 points after (57-90). The patients were fully satisfied with 17 of the 29 procedures and satisfied with reservations in 12 cases. No patient was dissatisfied with the outcome. Clinical and radiological union was observed in all cases. The orthopedic hardware was removed due to pain or local discomfort in 18 feet (62% of cases).

Conclusion: FMTPA fixed with crossed Kirschner wires for hallux valgus treatment is highly effective, with a high union rate and a high degree of patient satisfaction.

Keywords: Hallux valgus; Metatarsophalangeal arthrodesis; Cerclage; Bunion.