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Complications of first tarsometatarsal joint arthrodesis

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ABSTRACT

Introduction: First tarsometatarsal joint arthrodesis, more commonly known as the Lapidus procedure, is used to treat severe hallux valgus, associated first ray hypermobility and regional osteoarthritis. Despite its high rate of deformity correction and resolute power, the technique is not without complications. However, there is little scientific evidence regarding complications after this procedure.

Objective: This study aims to record complications associated with first tarsometatarsal joint arthrodesis.

Methods: Patients who underwent this arthrodesis procedure, which was performed by different surgeons trained at Paulista School of Medicine, Federal University of São Paulo, were assessed over a series of outpatient follow-up visits.

Results: In total, 16 patients operated on in over an 18-month period were evaluated in this study. During this period, 8 patients developed some type of complication, either major or minor. Three patients experienced deformity relapse, one case of which with associated pseudarthrosis; 2 patients had delayed union; 2 patients had hardware loosening, one of whom had associated pseudarthrosis; and one patient had surgical wound dehiscence. In all cases, the procedure was completed using high-quality materials.

Discussion: In our literature review, we found various complications, including pseudarthrosis, delayed union, symptomatic hardware, relapse and loss of correction. There are reports in the literature of surgical technique modifications, such as changes in fixation types and implant positioning, to reduce the rate of these complications. However, even with new implants and the evolution of the procedure, this surgery still requires a steep learning curve, and the rate of complications is not small.

Keywords: Arthrodesis; Metatarsophalangeal; Hallux valgus/surgery; Hallux valgus/complications.

