High Rate of Recurrence Following Proximal Medial Opening Wedge Osteotomy for Correction of Moderate Hallux Valgus

Sravisht Iyer, MD, Constantine A. Demetracopoulos, MD, Carolyn M. Sofka, MD, and Scott J. Ellis, MD

Abstract
Background: The proximal medial opening wedge (PMOW) osteotomy has become more popular to treat moderate to severe hallux valgus with the recent development of specifically designed, low-profile modular plates. Despite the promising results previously reported in the literature, we have noted a high incidence of recurrence in patients treated with a PMOW. The purpose of this study was to report the clinical and radiographic outcomes of an initial cohort of patients treated with a PMOW osteotomy for moderate hallux valgus.

Methods: We retrospectively analyzed prospectively gathered data on a cohort of 17 consecutive patients who were treated by the senior author using a PMOW osteotomy for moderate hallux valgus deformity. Average time to follow-up was 2.4 years (range, 1.0-3.5 years). The intermetatarsal angle (IMA), the hallux valgus angle (HVA), and the distal metatarsal articular angle (DMAA) were assessed on standard weightbearing radiographs of the foot preoperatively and at all follow-up visits. The Foot and Ankle Outcome Score (FAOS) was collected on all patients preoperatively and at final follow-up.

Results: Despite demonstrating good correction of their deformity initially, 11 of the 17 patients (64.7%) had evidence of recurrence of their hallux valgus deformity at final follow-up. Patients who recurred had a greater preoperative HVA ($P = .023$) and DMAA ($P = .049$) than patients who maintained their correction. Improvement in the quality-of-life subscale of the FAOS was noted at final follow-up for all patients ($P = .05$). There was no significant improvement in any of the other FAOS subscales.

Conclusions: There was a high rate of recurrence of the hallux valgus deformity in this cohort of patients. Recurrence was associated with greater preoperative deformity and an increased preoperative DMAA. The PMOW without a concomitant distal metatarsal osteotomy may be best reserved for patients with mild hallux valgus deformity without an increased DMAA.

Level of Evidence: Level IV, retrospective case series

Keywords: proximal metatarsal osteotomy, proximal medial opening wedge osteotomy, hallux valgus, recurrent hallux valgus

TMC Summary
- Study Design:
  - 2.4 year avg follow up of 17 bunion patients undergoing proximal medial opening wedge osteotomy (PMOW)
- Findings:
  - 64.7% had radiographic evidence of deformity recurrence at 2.4 yrs
- Interpretation:
  - Correction of the bunion deformity with metatarsal osteotomy (even proximal osteotomy) without appreciation of metatarsal frontal-plane rotation resulted in an unacceptably high recurrence rate at just 2.4 years