Medial opening wedge osteotomy of the proximal 1st metatarsal utilizing plate fixation with a built in spacer combined with a distal soft tissue procedure offers a simple, powerful, reproducible and effective method of treatment of moderate to severe hallux valgus deformity in the short term.

Proximal 1st metatarsal osteotomies are recommended for moderate or greater hallux valgus deformities (IM ≥14°, HV ≥ 30°). There are many choices for proximal osteotomy, however they are all fraught with potential problems, particularly technical difficulty and malunion. Opening wedge osteotomy with plate fixation offers a potentially simple and reproducible alternative to traditional proximal metatarsal osteotomies.

This is a retrospective study of 56 feet in 50 consecutive adult patients, with an IM angle ≥14°, who were treated with a medial opening wedge osteotomy of the proximal 1st metatarsal utilizing plate fixation with a built in spacer. Pre and post-operative radiographic measurements and post-operative AOFAS scores were obtained. The average follow up was 18 months (range 12-26 months). Thirty of 32 patients were female with an average age of 60 (range 24-74). A distal soft tissue procedure was added in all cases. Calcaneal bone graft was used in 48 patients. There was an average of 1 other lesser toe procedure per case.

Pre-operative IM and HV angles were 14.8° (12°-20°) and 33° (24°-48°), respectively. Post-operative IM and HV angles were 7.5° (4°-14°) and 11.6° (-8°-35°). The average post operative AOFAS score was 86. No dorsal mal-unions or non-unions were noted. Radiographic union occurred by 12 weeks in all patients. There were no cases of calcaneal stress fractures. 46 out of 56 plates had wedges of 4 mm or more. IM angle correction was averaged approximately 2° per 1 mm wedge, however some variations existed. Metatarsal lengthening averaged less than 3 mm in all cases. There were 6 cases of symptomatic hallux varus which resulted in further surgery.

Medial opening wedge osteotomy of the proximal 1st metatarsal utilizing plate fixation with a built in spacer combined with a distal soft tissue procedure offers a simple, powerful, reproducible and effective method of treatment of moderate to severe hallux valgus deformity in the short term. Care should be taken as to not overcorrect the IM angle.