Supramalleolar Osteotomy combined with Intra-articular Osteotomy for the Reconstruction of Malunited Supination-Adduction Ankle Fractures
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Introduction/Purpose: The supination-adduction ankle fractures often showed vertical impaction of the tibial medial plafond. The malunion of these fractures cause the varus ankle deformity and secondary ankle arthritis. This retrospective control study looked at the use of supramalleolar osteotomy combined with intra-articular osteotomy in patients with malunited supination-adduction ankle fractures.

Methods: Twelve patients were treated with malunited supination-adduction ankle fractures between January 2013 and December 2014. All of these patients had the varus ankle deformity and secondary ankle arthritis. Supramalleolar osteotomy combined with intra-articular osteotomy were underwent for the reconstruction surgery. The visual analog scale (VAS) score for pain during daily activities, Olerud and Molander Scale scores, subjective satisfaction survey rating and the modified Takakura classification stage were obtained. Ten patients were available for follow-up at a mean of 35.4 months (range, 28 to 40 months).

Results: Average postoperative Olerud and Molander Scale score 24 months after surgery was 83±10 compared with 60±14 preoperatively. The mean VAS score decreased from 7±2 preoperatively to 2±2 at the latest follow-up. Six patients rated their result as excellent, 3 as good and 1 as fair. No significant difference in the modified Takakura classification stage was observed between the preoperative and the last follow-up.

Conclusion: The use of supramalleolar osteotomy combined with intra-articular osteotomy was an effective option for the treatment of malunited supination-adduction ankle fractures.

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