Primary Midfoot Arthritis: Functional Outcomes Following Midfoot Arthrodesis
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Objectives: Primary midfoot arthritis is a disabling painful condition of the foot. The aim of the study was to assess the functional outcomes following midfoot arthrodesis for primary midfoot arthritis with or without arch collapse.

Methods: This retrospective study included 95 patients (104 feet), who had undergone midfoot arthrodesis for primary midfoot arthritis between 2000 and 2006. The indication for surgery was presence of pain despite adequate nonoperative management. Midfoot collapse, if present was corrected at the time of arthrodesis. Gastrocnemius contracture was present in 78% of feet. In all, 297 individual midfoot joints were arthrodesed. Complications and reoperations were evaluated. Radiographs were reviewed for correction of deformity. Outcome evaluation was completed using pain score, American Foot Ankle Orthopaedic Society (AOFAS) midfoot score and patient satisfaction.

Results: We achieved union in 96 out of 104 feet (92.3 %) after primary procedure and 103 out of 104 feet (99 %) after revision arthrodesis with one asymptomatic nonunion. When we evaluated the individual joints, we achieved union in 287 out of 297 joints (96.6%) after primary procedure and 295 out of 297 joints (99%) after revision procedure. Hardware removal was required in 26 feet due to symptomatic hardware. We had 12 complications including eight nonunions, three deep infections and one complex regional pain syndrome. There were 11 reoperations including seven revision arthrodesis. Radiographically, we found a significant improvement in talus-first metatarsal angles, talonavicular uncoverage and medial cuneiform height. Functional outcomes were available in 68 patients (74 feet). The mean follow up of 74 feet was 56 months (range, 24-102). The pain improved from a mean preoperative score of 6.7±1.7 to mean postoperative score of 2.3±2.4. The mean AOFAS score improved from a mean preoperative score of 32 (range, 25 to 43) to mean postoperative score of 79 (range, 65 to 90). More than ninety percent of patients were satisfied with the functional outcome. We did not find any statistically significant difference in union rates, pain and AOFAS scores between smokers and non smokers and diabetics and non diabetics.

Conclusion: Midfoot arthrodesis seems to be a good procedure for the treatment of primary midfoot arthritis following failure of conservative management. It achieves excellent patient satisfaction, high union and low complication rates. The deformity arising out of midfoot collapse can be corrected during the same time.