Outcomes of Combined Modified Kidner Procedure with Subtalar Arthroereisis for the Correction of Painful Accessory Navicular Associated with Planovalgus Deformity

Presenting Author:
David N. Garras, MD – Philadelphia, Pennsylvania

Additional Authors:
Patricia Hansen, MS
Steven M. Raikin, MD

Summary
Type 2 accessory navicular is often associated with planovalgus deformity. The modified Kidner procedure addresses the painful os, but does not correct the deformity. This study evaluates 24 feet undergoing a Kidner combined with subtalar arthroereisis. In addition to significant improvement in pain and function, deformity correction was obtained and maintained at an average 65.6 months clinically and radiographically. Two patients required removal of the arthroereisis plug, without re-development of their deformity.

Introduction
Type II accessory navicular is frequently associated with planovalgus deformity. Surgical treatment for symptomatic patients recalcitrant to nonoperative treatment involves resection, with or without takedown and reattachment of the tibialis posterior tendon. This does not address the planovalgus deformity which may lead to long term dysfunction. We hypothesized that combination of subtalar arthroereisis to correct the deformity followed by the modified Kidner procedure would lead to improvement of pain and function and correction of the deformity, potentially preventing future problems.

Methods
IRB approved, prospectively collected data was reviewed for 21 patients (24 feet) undergoing a combined modified Kidner and subtalar arthroereisis for painful type 2 accessory navicular with planovalgus deformity recalcitrant to nonoperative treatment. Patients were evaluated preoperatively and at final followup clinically, radiographically, via the visual analog pain scale, the AOFAS ankle hindfoot score, and a satisfaction rating.

Results
The average age at the time of surgery was 18 years. Mean follow up was 65.6 months. The mean AOFAS-AH scores improved from 67 preoperatively to 92 at final followup and the mean VAS score decreased from 7.2 preoperatively to 1.4 at final follow-up. The average Meary’s angle improved from 23 degrees preoperatively to three degrees at final followup and the average talar head uncoverage improved from 34% preoperatively to 12% at final followup. 19 of 21 patients had good or excellent results. 2 patients required implant removal due to pain; no recurrence of planovalgus deformity occured. No patients developed subtalar arthritis.

Conclusions
The modified Kidner procedure combined with a subtalar arthroereisis results in significant pain and functional improvement. The deformity correction obtained at surgery is maintained at an average 65 months, even if the arthroereisis plug has to be removed. The extra-articular plug does not lead to subtalar arthritis.