Revision of Subtalar Joint Arthrodesis with Trabecular Wedge Cage: A Case Series

Foot and ankle surgeons are often faced with the difficult case of a depressed subtalar joint (STJ) as a sequelae of failed subtalar joint arthrodesis or collapse due to a past intraarticular calcaneal fracture. This case series presents an option to correct the loss of STJ height following calcaneal fracture (Fig. 1) or failed STJ fusion. One patient had failed STJ fusion as part of failed TTC fusion, 1 patient with STJ arthritis status post calcaneal osteotomy reduction at another institution, and 1 patient with primary arthritis of the STJ with a tarsal coalition. Two patients were current tobacco users. Comorbidities were remarkable for morbid obesity in 3 of the 6 patients in the study. Of those 3, 2 had diabetes mellitus as well. It should also be noted that one patient had a documented vitamin D deficiency that was diagnosed after the original attempt at STJ fusion. All patients went on to radiographic and clinical fusion (Fig. 6). Patients were weightbearing in a CAM boot in an average of 61.6 days. All patients were able to ambulate postoperatively with or without the use of a brace. The average increase in talocalcaneal angle on lateral radiographs was 10 degrees. This increase in talocalcaneal angle (posterior STJ height loss) allowed for resolution of all preoperative symptomology. Complications were minor and included a forefoot varus and one DVT that was successfully treated. No major complications occurred. Average follow up time for all patients was 12.2 months. Results are seen below (Table 1).

Methods

STJ distraction arthrodesis with a trabecular cage was performed on 6 patients with pathologies including failed subtalar joint arthrodesis, STJ depression following calcaneal fracture, and STJ arthritis status post calcaneal osteotomy reduction at another institution. Of the two failed cases, one was due to non-union and the other was due to late collapse (8,10,11). Overall, traditional methods including failed subtalar joint arthrodesis, STJ depression following calcaneal fracture, and STJ arthritis status post calcaneal osteotomy reduction at another institution. Of the two failed cases, one was due to non-union and the other was due to late collapse. These procedures; however, of the two failed cases, one was due to non-union and the other was due to late collapse. These procedures; however, of the two failed cases, one was due to non-union and the other was due to late collapse.