Intraoperative management and post operative complications of total ankle arthroplasties with talar bone loss.

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INTRODUCTION: As the incidence and indications for total ankle arthroplasty (TAA) continue to expand the need to better understand the risk factors becomes increasingly important. Talar bone loss whether from avascular necrosis, osteoarthritis, or post traumatic arthritis can be a challenging problem to deal with in TAA. The aim of this study is to report the operative characteristics, clinical complications, and radiographic changes in patients status post TAA in the setting of talar bone loss.

METHODS: A retrospective review using CPT codes for four surgeons over a three year period at an academic institution was performed. A single surgeon reviewed the immediate preoperative plain radiographs for 200 consecutive patients for talar bone loss. The mortise and lateral views were used and an example measurement is shown in Figure 1. 38 patients were identified as having talar bone defects of greater than 20 percent when the two measurements were averaged. A chart review was then performed that included demographic information, additional procedures at the primary procedure, use of adjuvants, reoperation rates and, subsidence rates.

RESULTS: The average follow up was 23 months. The average defect was 44 percent with a range of 20 to 100 percent. Overall the reoperation rate was 34 percent with the plurality being I&Ds of both superficial and deep infections. Two patients ended up with below knee amputations. Subsidence of talar components occurred at a rate of 43 percent with about half of these having a reoperation. 68 percent of the patients had additional procedures such as tendon Achilles lengthening, lateral ligament reconstruction, and various osteotomies. 35 percent of talar components were cemented and there was an intra operative complication rate of 14 percent with the most common being intra operative fracture.

DISCUSSION AND CONCLUSION: While TAA for patients with talar bone loss can be a good option for both the patient and surgeon it has a higher complication rate in our series than previously described. Careful surgical strategy including implant choice is paramount and the need for additional procedures should be considered