Wound Healing Complications in Diabetics After Total Ankle Replacement

Cynthia A. Luu DPM¹; Jerome K. Steck, DPM²

¹Tucson Medical Center/Midwestern University Residency Program ²Southern Arizona Orthopedics, Tucson, AZ

INTRODUCTION

• Diabetes mellitus is an increasing issue in industrialized nations and diabetic patients undergoing joint replacement have been shown to have higher rates of complications
• With improved total ankle implant designs, the frequency of total ankle replacement (TAR) as an alternative to ankle fusion has increased and has led to increased longevity and higher success rates
• Wound healing complications after TAR range from 4%-50% in the literature
• Incisional healing complications can lead to devastating outcomes such as infection, longer length of hospital stays, and other sequelae

OBJECTIVE

• This case series investigates the incidence of wound healing complications in diabetics after TAR and the difference in time to incisional healing versus the standard mean of two weeks

MATERIALS AND METHODS

• Medical records of 220 patients who had undergone TAR between January 2011 and September 2016 were retrospectively reviewed
• Indication for TAR was end-stage arthritis of the ankle which had failed conservative treatment
• All patients with the diagnosis of diabetes mellitus and wound healing complications were included with a minimum follow up of 1 year

RESULTS

• 32/220 patients were documented as diabetic
• Overall incidence of wound healing complications in diabetic patients was 5/32 (15.6%)
• 1 patient was lost to follow up and 1 patient was not including as the incision had not fully healed at the time of this study
• The average time to incision healing in the remaining 3 patients was 20.7 weeks versus the mean of 2 weeks when sutures are typically removed
• 1 patient required 2 irrigation and debridements with poly exchanges and a plastics procedure for complex closure
• 2 healed with local wound care and antibiotics
• None required complete removal of the implant
• At 1 year follow up, 3/3 (100%) of patients all went to fully heal their incisions with successful retention of the implant

CONCLUSIONS

• Diabetes is a known risk factor for wound healing complications in any surgery and is a concern after TAR
• When selecting candidates for TAR, it is imperative to assess known preoperative risk factors
• The rates of delayed wound healing vary in the literature and we found an incidence of 15.6% in our diabetic population
• The patients in our study were relatively well controlled with HbA1c <7.5% and all went on to fully heal with successful retention of the implant at 1 year follow up

REFERENCES


CONTACT

Cynthia A. Luu, DPM PGY-3
luu.cynthia@gmail.com