Diabetes in Total Ankle Arthroplasty

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NO CONFLICT TO DISCLOSE

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My disclosure is in the Final AOFAS Mobile App.

I have no potential conflicts with this presentation.
Introduction

• Diabetes: 380 million people affected worldwide by 2025 (Lambert, 2014)
• Total Ankle Replacement (TAR) indications are expanding
• Diabetes thought to be a relative contraindication
Diabetes in Total Joint Literature

• In THA (Tsang, 2013), prevalence of DM: 5.0%
  – increased risk of:
    • surgical site infection
    • urinary infection
    • lower respiratory tract infections (OR=1.95).

• In a TKA registry (Singh, 2013): DM associated with poorer functional outcome.

• Mean postoperative complication rates in total joint arthroplasties increased along with HbA1c levels (Goldstein, 2013)
Diabetes in Total Ankle Arthroplasty

- Schipper, et al, FAI 2015
  - 307 DM TAR in 2,973 patients
  - Longer inpatient stay; higher complication rate; increased blood transfusion rate

- Raikin, et al, JBJS 2010
  - DM associated with wounds that required local care or oral Abx
  - Not associated with wounds that required a return to the OR
Purpose

- To describe the functional outcomes in TAR patients with DM
- To compare the infection and complication rates to a control group

Hypothesis

- We hypothesize that the presence of diabetes does not increase wound complications, infection rates, or adversely affect functional outcomes.
Methods

• Consecutive series of 871 patients who underwent 3rd generation TAR
• 50 patients had DM (6.2%)
• 54 patients in Control group (sex-matched)

• Clinical and functional outcomes, wound healing issues, superficial or deep infection rates, complications, and failure rates were compared.
• AOFAS, SMFA, FADI, VAS, SF-36 compared
Results

• Mean patient follow-up in the DM group was 2.3 years and 3.1 years in the control group.
• Age and BMI significantly lower in control.
• Smoking rates and higher ASA grading in DM.
• ***Similar wound complication rates.
Complication rates

• Five patients in the DM group (10.0%) had a total of five surgeries that were directly related to TAR

• Eight patients (14.6%) in the control group had a total of nine re-operations that were directly related to TAR

• ***No significant difference in complication or revision rates
Functional Outcomes

• For both the DM and control groups, all functional outcome scores except SF-36 General Health were significantly improved at 1 yr post-op compared to pre-op scores.
• These improvements were maintained at most recent follow-up.
• The magnitude of improvement in SF-36 General Health was significantly better in the control group compared to the DM group at 1 yr post-op (p=0.046) and borderline significant at most recent follow-up.
Conclusions

• Diabetic and control group had similar wound, complication, revision and infection rates
• Diabetic patients had similar functional scores post-operatively
• Diabetes should not be considered a contraindication to TAR
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