INTRODUCTION

- Diabetes is a known risk factor for postoperative complications following arthroscopy.
- **Diabetes can further be stratified by their method of glycemic control:**
  - Insulin-dependence (IDDM), and
  - Non-insulin dependent diabetes (NIDDM)
- It has been shown that patients with IDDM have much higher risks for morbidity and mortality following lower extremity arthroplasty.
- The goal of this study is to compare complications following shoulder and knee arthroscopy in patients with IDDM and NIDDM.
- **Our hypothesis is that patients with IDDM will have a higher risk for postoperative complications than nondiabetics and those with NIDDM after shoulder arthroscopy.**

METHODS

- A retrospective analysis of the NSQIP database for the years 2005-2016.
- All patients undergoing shoulder or knee arthroscopy were identified by CPT code.
  - All surgeries performed for infections were excluded.
- Logistic regressions were used to assess the relationship between diabetic treatment method and outcomes.
- Multivariate models adjusted for:
  - Demographics: age, gender, BMI
  - Comorbidities: hypertension, CHF, COPD,
  - Tobacco use
  - ASA classification
  - Functional status
RESULTS: Shoulder Arthroscopy

- Patients with IDDM were at a much higher risk for:
  
  - **Medical complications by 55.2%** (AOR 1.552, p=0.022), including
    - Pulmonary complications by 107% (2.078, p=0.027)
    - Urinary tract infections by 113% (2.129, p 0.042)
  
  - **Hospital readmission by 58.1%** (AOR 1.581, p=0.004)
  
  - **30-day mortality by 282%** (AOR 3.821, p=0.019)

Conversely, patients with NIDDM had comparable risks for medical and surgical complications, unplanned hospital admission, and mortality as nondiabetics following shoulder arthroscopy.

RESULTS: Knee Arthroscopy

- Patients with IDDM were at a much higher risk for:
  
  - **Surgical complications by 119%** (AOR 2.186, p=0.001), including
    - Deep infections by 208% (AOR 3.082, p<0.001)
    - Return to OR by 93% (AOR 1.933, p=0.002)
  
  - **Hospital readmission by 77.0%** (AOR 1.770, p=0.002).

However, NIDDM was not an independent risk factor for subsequent medical or surgical complications, unplanned hospital admission, or 30-day mortality following knee arthroscopy.
CONCLUSIONS

- Following shoulder arthroscopy, patients with IDDM were much more likely to have medical complications, 30-day hospital admission, and mortality.

- Following knee arthroscopy, patients with IDDM were much more likely to have surgical complications, including deep infection and return to OR, as well as hospital readmission.

- All of these risks diminished among those with NIDDM, with their adjusted risk profiles becoming comparable to those without diabetes.

- Physicians and hospitals should keep these issues in mind when risk-stratifying patients regarding prior to shoulder and knee arthroscopy.

DIscLASSMENT

Our authors have some disclosures. More information can be found on the AAOS Orthopaedic Disclosure Program:
http://www7.aaos.org/education/disclosure/search.aspx

REFERENCES


