Insulin-Dependence Predicts Risk of Complications Following Shoulder and Knee Arthroscopy

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Disclosures

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Insulin dependence has been shown to significantly increase the risk of morbidity and mortality after spine surgery and shoulder, hip, and knee arthroplasty.

While prior studies have examined the risks of complications following arthroscopy in diabetics, no study has stratified diabetics undergoing arthroscopy by their method of glucose control.
The authors hypothesized that insulin-dependent diabetics (IDDM) would have a much higher complication rate following knee and shoulder arthroscopy than noninsulin-dependent diabetics (NIDDM) or nondiabetics.
Materials and Methods

• ACS-NSQIP database was queried for all patients undergoing shoulder and knee arthroscopy from 2005-2016

• Patients were stratified by their method of insulin-control:
  • Insulin-dependent diabetic (IDDM)
  • Noninsulin-dependent diabetic (NIDDM)
  • Nondiabetic

Primary outcomes:
1. Medical complications
2. Surgical complications
3. Hospital readmission
4. 30-day mortality
58,442 patients were identified
- 9% NIDDM and 4.3% IDDM

IDDM had increased risks for:
- Medical complications (AOR 1.552)
- Pulmonary complications
- Urinary tract infections
- Hospital readmission (AOR 1.581)
- 30-day mortality (AOR 3.821)

NIDDM had comparable risks in all outcomes to nondiabetics.
86,023 patients were identified
- 7.0% NIDDM and 2.7% IDDM

IDDM had increased risks for:
- Surgical complications (AOR 2.186)
  - Deep infections
  - Return to OR
- Hospital readmission (AOR 1.770)

NIDDM had comparable risks in all outcomes to nondiabetics
Conclusions

- Patients with IDDM undergoing shoulder arthroscopy have increased risks for:
  - Medical complications
  - Hospital readmission
  - 30-day mortality

- Patients with IDDM undergoing knee arthroscopy have increased risks for:
  - Surgical complications
    - Deep infection
    - Return to OR
  - Hospital readmission
Conclusions

• NIDDM have no increased risk for medical or surgical complications, hospital readmission, or 30-day mortality than nondiabetics following arthroscopy.

• Surgeons and hospitals can further stratify a diabetic’s postoperative risk following shoulder and knee arthroscopy based on their method of glucose control.
References


