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Complications in Arthroscopic Rotator Cuff Repairs: A Consideration of Operative Age

INTRODUCTION: Shoulder arthroscopy is frequently performed in rotator cuff repair (RCR). Although prior studies have examined risk factors for 30-day complications following arthroscopic RCR, as of yet, no study has investigated specific age groups to characterize the types and risk of complications.
METHODS: The National Surgical Quality Improvement Program was queried to identify adults who underwent arthroscopic RCR between 2008 and 2016. Patients were stratified into age groups of 5 years starting from age 50. Univariate analysis assessed patient age ranges and postoperative complications within 30 days. Binary logistic regression analysis predicted relative odds of complications, reoperation, and readmission within each age group.
RESULTS: 28,280 patients (male 58%, white 74.6%) who underwent arthroscopic RCR were identified with a mean age of 58.4 years. Prevalence of any complication significantly increased with age group (50-54: 31/5270 [0.73%]; 55-59: 42/5012 [0.83%]; 60-64: 24/4887 [0.49%]; 65-69: 44/4145 [1.1%], 70-74: 31/2542 [1.2%]; 75-79: 30/1254 [2.4%]; 80+ 12/510 [2.4%]; p<0.001). Ages 75-79 and 80+ had significantly increased readmission rates (2.3% each, p=0.002). Relative to patients aged 50-54, age groups 75-79 (OR=2.8 95% CI [1.7 – 4.6], p<0.001), and 80+ (OR=2.6 95% CI [1.3 – 5.2], p=0.001) were significantly more likely to develop any complication. Ages 75-79 (OR=2.1 95% CI [1.2 – 3.5], p=0.001) were more likely to be readmitted.
DISCUSSION: Increasing age was associated with increased complication rates for patients undergoing arthroscopic RCR. Patients 75 and older were at a significantly increased risk for any complication or readmission. These findings highlight the need to reconsider operative age and adjust preoperative plans accordingly in this patient population to minimize postoperative complication risk.