

## The Characteristics and Outcomes of Rotator Cuff Tear According to Age

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### Purpose

To analyze the outcomes and the characteristics of rotator cuff tear according to age.

### Materials and Methods

The consecutive 177 patients (81 males and 96 females) between April 2004 and November 2007 had undergone rotator cuff repair, and received both CT arthrography (CTA) and functional evaluations at least 1 year of surgery (visual analogue scale (VAS) for pain and satisfaction, Constant score, Simple Shoulder Test (SST), and American Shoulder and Elbow Surgeons (ASES) score). The correlation was assessed between age and outcomes with adjustment of preoperative score. Various structural and clinical features according to age were also evaluated.

### Results

The mean age of the patients was  $60.0 \pm 8.7$  years. Retear group (55, 31.1%) was more aged than intact group (122, 68.9%), that is,  $63.7 \pm 7.5$  and  $58.4 \pm 8.7$  years, respectively. There were no age differences according to symptom duration and traumatic episode ( $p > 0.05$ ). Adjusted functional scores did not show correlation with age ( $p > 0.05$ ), however, Constant score showed positive correlation with age after adjustment ( $p = 0.004$ ). Regression analysis revealed 0.268 point increment could be expected according to 1 year. Among the structural and clinical features, older age was related to larger tear size, bigger retraction of tear, and lower isokinetic performance of both affected and unaffected shoulder ( $p < 0.05$ ). In independent T-test, female, nonsmoker, stiffness, positive lag sign, acromioclavicular arthritis, associate biceps pathology, low sports level and low activity demand groups were more aged than not ( $p < 0.05$ ). In ANOVA test, mean age of each fatty degeneration grade of the cuff muscle was significantly different ( $p < 0.001$ ), and older in higher fatty degeneration grades.

### Conclusions

In older patients, the anatomic outcome was inferior. However, rotator cuff repair brought significant functional improvement regardless of age. Adjusted postoperative Constant score showed positive correlation with age due to inferior preoperative score in older patients.

**Key Words:** Age, Rotator cuff tear, Anatomical outcome, Functional outcome