

## Which is Better Between Conventional En Masse Repair Versus Separate Double-Layer Double-Row Repair for the Treatment of Delaminated Rotator Cuff Tears: A Prospective Randomized Study

Yang-Soo Kim, MD, PhD, Prof., KOREA, REPUBLIC OF

Hyo-Jin Lee, MD, Prof., KOREA, REPUBLIC OF

In Park, MD, KOREA, REPUBLIC OF

Hong-Ki Jin, MD, KOREA, REPUBLIC OF

Dong-Hyuk Sun, MD, KOREA, REPUBLIC OF

Sung-Ryeoll Park, MD, KOREA, REPUBLIC OF

Jin Hong Kim, MD, KOREA, REPUBLIC OF

Dongjin Kim, MD, KOREA, REPUBLIC OF

Jong-Ho Kim, MD, KOREA, REPUBLIC OF

Seoul St. Mary's Hospital, The Catholic University of Korea

Seoul, KOREA, REPUBLIC OF

### Summary:

Despite the growing interest on delaminated rotator cuff tear, the optimal surgical method is still controversial. In this prospective study, the result of two different surgical methods; en masse repair and separate double layer double row repair were compared. Both treatments were effective in improving clinical outcomes. Lower pain scores were seen in separate double-layer double-row repair.

### Abstract:

#### Introduction

Recently, there has been a growing interest on the delaminated tear of full thickness rotator cuff tear. For the treatment of delaminated rotator cuff tear, conventional suture bridge (transosseous equivalent) repair, described as en masse repair and separate double layer double row repair have been performed. The aim of this study was to determine the optimal surgical method for the treatment of delaminated rotator cuff tear. For this purpose, we compared clinical results between conventional en masse repair and separate double-layer repair for the treatment of delaminated rotator cuff tear.

#### Methods

Between August 2007 and March 2014, a total of 82 patients who underwent arthroscopic rotator cuff repair of a delaminated tear were enrolled and randomized into 2 groups. In group 1 (n = 48), arthroscopic conventional en masse repair was performed. In group 2 (n = 34), separate double-layer double-row repair was performed. Articular layer was repaired in knotless manner. The American Shoulder and Elbow Surgeons score, Constant score, Simple Shoulder Test score, and visual analog scale (VAS) score for pain and range of motion (ROM) were assessed before surgery; at 3, 6, and 12 months after surgery; and at the last follow-up visit. Magnetic resonance imaging (MRI) was performed at 12 months postoperatively to examine the retear rate and pattern.

#### Results

There was no significant difference between groups in the preoperative demographic data, including patient age, sex, symptom duration, tear size, and functional scores ( $P > .05$ ). The mean follow-up period was 25.9 months. The group 2 had significantly lower VAS pain scores ( $P < .05$ ) at postoperative 3, 6, and 12 months. The functional scores and ROM showed no significant difference between the groups at each time point. Eight of 48 patients in group 1 and six of 34 patients in group 2 showed re-tears on MRI at 12 month follow up, but the difference was not significant statistically ( $P > .05$ ).

# ISAKOS

**International Society of Arthroscopy, Knee Surgery and  
Orthopaedic Sports Medicine**

11<sup>th</sup> Biennial ISAKOS Congress • June 4-8, 2017 • Shanghai, China

---

## Paper #152

### Conclusion

Both conventional en masse repair and separate double-layer double-row repair were effective in improving clinical outcomes in the treatment of delaminated rotator cuff tears. However, lower pain scores were seen in patients who underwent separate double-layer double-row repair.