

Correlation of Clinical and Structural Outcomes After Arthroscopic Rotator Cuff Repair With a Suture Bridge Technique

Kwang Woo Nam, MD, KOREA
Sungwook Choi, MD, PhD, KOREA
Myung Ku Kim, MD, KOREA
Sang Rim Kim, KOREA
Hyun Seong Kang, MD, KOREA
Chen Tai Teong, MD, KOREA

Jeju National University Hospital
Jeju, KOREA

Summary:

Arthroscopic suture bridge rotator cuff repair have higher healing rate, improvement in the pain relief and the ability to perform the activities.

Abstract:

Title:

Correlation of clinical and structural outcomes after arthroscopic rotator cuff repair with a suture bridge technique

Background:

According to biomechanical comparative studies, the suture bridge repair technique has been proven to produce better results than the other techniques. However, it is unclear whether clinical outcomes correlate with structural outcomes after suture bridge repair.

Purpose:

To evaluate the clinical outcomes and the maintenance of repair integrity after arthroscopic rotator cuff repair using a suture bridge technique for patients with over the medium sized rotator cuff tears.

Method:

Seventy three patients (35 males, 38 females) underwent arthroscopic rotator cuff repair with suture bridge repair technique from May, 2008 to september, 2010. Clinical and functional evaluations were made according to the Constant score, the UCLA score, as well as a full physical examination of the shoulder. All patients were judged to reveal healed tendon on magnetic resonance imaging (MRI) at least 12 months after postoperatively.

Results:

The average age at the time of surgery of the 73 patients was 61.4 years (range, 46 to 77 years). The average duration of postoperative time in which a follow-up MRI was performed was 20.8 months (range, 12 to 41 months). The average clinical outcome scores and strength were all improved significantly at the time of the last follow-up ($P < 0.001$). The overall rate of retears (type IV, V) was 17 cases (23.3%) The larger the intraoperative tear size, the higher the rate of re-tear ($P < 0.002$). When the preoperative fatty degeneration grade was higher, the incidence of re-tear was also increased ($P < 0.001$). The incidence of re-tear tended to increase with age older than 60 years ($P < 0.045$). Although heavy worker group showed more re-tear, this difference did not reach statistical significance. ($P < 0.186$).

Conclusions:

Arthroscopic suture bridge rotator cuff repair have higher healing rate, improvement in the pain relief and the ability to perform the activities. Tendon healing is affected by various factors. The re-tear site tended to be more frequently

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in the musculotendinous junction area. Interestingly, almost all patients were satisfied with the results of the surgery, although repair integrity is not maintained.

Keywords:

shoulder; rotator cuff repair; suture bridge technique; retear; outcome