Early MRI Findings of Arthroscopic Superior Capsule Reconstruction (ASCR): How to Prevent Early Failure

SS-47

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Introduction: Find out the early graft failure rate and analyze the factors after ASCR.
Methods: From June 2013 to April 2016, consecutive patients who underwent ASCR in our institution were queried. Indication for ASCR was patients with massive cuff tear that were deemed irreparable after arthroscopic examination. Any patients who were lost to follow-up, or did not have MRI postoperatively were excluded. When ASCR were determined after arthroscopic examination, bursectomy and acromioplasty are done. Ipsilateral autogenous fascia lata was harvested and prepared to be folded in 2-3 layers. Two or three anchors are inserted on glenoid and greater tuberosity, respectively. During regular postoperative follow-up, MRI was used to check the integrity of graft. Graft tear was defined as loss of continuity on T2 coronal image. Patient's age, failure site and preoperative tear size was compared between failure group and intact group.
Results: A total of 28 patients underwent ASCR, 2 patients were lost follow-up. A mean 5 months postoperative MRI was analyzed for graft tear. Average age of patients was 64.8 years ,and consists of 9 male and 17 female. Eight patients out of 26 patients show graft tear. Most of these failure were early cases of the study. Six patients showed failure of graft at lateral anchor area, and two patients showed mid-substance graft failure. Mean age of failure group was 70.9 years old which was higher than the intact group (62.1 years).
Conclusion: Early failure rate by MRI study was 30.7%. Most failures occurred at the lateral anchor site presumably because of failure to match the graft size which led to excessive tension. Also age was a risk factor for early failure. To prevent these early failure, it is important to harvest adequate graft and acquire reconstruction with minimum tension. Older patients may need different approach considering the relatively high failure rate.

Biceps Tendon Tenodesis without Tenotomy: A Method of Augmenting Partial Repairs of Massive Rotator Cuff Tears

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Introduction: To determine if biceps tendon tenodesis without tenotomy , when used in addition to partial repairs of massive rotator cuff tears, allowed for improved patient satisfaction outcomes without significant loss of motion.
Methods: 15 patients with massive cuff tears(>5 sq. cm.) underwent repair in addition to tenodesis of the long head biceps tendon. The long head origin was not cut and therefore left intact. The follow up period was a minimum of 12 months with a maximum of 24 months. Preoperative and follow up results were measured by Oxford Pain Scores, American Shoulder and Elbow Surgeons Score (ASES), and Constant Shoulder Score. Range of motion loss was measured as a percentage of the combined range of motion of the opposite shoulder.
Results: The averaged Constant Score improved from 17.8 to 75.3. ASES improved from 16.3 to 77.4. Oxford Pain Score improved from 14 to 33. The average combined loss of motion was 9 degrees. No patient had pain in the biceps tendon groove at final evaluation.
Conclusion: Tenodesis without tenotomy of the biceps tendon long head when used in addition to partial repair of massive rotator cuff tears, may help to improve patiient satisfaction scores. The tenodesed long head may act as a restraint to superior humeral head migration, thereby reducing some of the stresses on the competed partial rotator cuff repair. This construct however, could result in a tethering of the shoulder and thereby result in significant loss of motion. The average combined loss of only 9 degrees had minimal clinical significance.

Sustained Improvement Following Arthroscopic Repair Massive Rotator Cuff Tears

SS-49

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Introduction: To determine the longer term outcomes of arthroscopic repair of massive rotator cuff tears.
Methods: A retrospective review of patients who underwent arthroscopic repairs of massive rotator cuff tears by a single surgeon was conducted. Criteria for inclusion were age greater than 18, history of arthroscopic repair of a massive rotator cuff tear (>5cm or >two tendons), no prior history of tear, and at least three years of follow-up visits following surgery. Once a list of patients meeting these criteria was collated, patients were contacted and informed consent was obtained. The main study variables consisted of the Penn Shoulder Score and ASES Shoulder Score; as such, these standard surveys were administered by research personnel following consent. . An average score for each survey was calculated and surgical notes were reviewed to determine strength on external rotation prior to surgery and whether full or partial coverage was achieved arthroscopically.
Results: 50 patients were deemed eligible for the study. 8 were excluded due to lack of clinical follow up and an additional 6 became deceased. Of 36 patients 5 patients declined participation and 6 were unable to be contacted leaving a response rate of 69%. The average participant age was 64.6, with 40% female and 60% male. 76% of participants were white, 20% African American, and 4% Asian. The average ASES survey score was 77.73, and the average Penn Shoulder Score was 78.08. Partial Repair (n=12) Full Repair (n=13) All Patients (n=25) Average