itself, and its impact on post-operative outcomes. We hypothesize that cuff thickness will be associated with clinical outcomes after arthroscopic rotator cuff repair in patients with full-thickness rotator cuff tears, especially in the elderly (aged > 65 years). Methods We prospectively recruited all patients aged 65 years and above who underwent arthroscopic repair of small to medium full-thickness rotator cuff tears at our institution. These patients were followed up for a minimum of 2 years post-operatively. Basic biodata, as well as Visual Analog Scale (VAS) for pain, Constant-Murley Score (CMS), UCLA Shoulder Score (USS), and Oxford Shoulder Score (OSS) at 3 different time points (preoperatively, 1 year post-operatively, and 2 year post-operatively) were collected. Cuff thickness was measured by independent blinded radiologist on pre-operative ultrasonographic images. Repeated measures ANOVA was performed to determine differences in clinical scores between each time period. Multiple linear regression was used to examine the effect of tendon thickness, as well as other variables such as age and gender, on VAS, CMS, USS, and OSS at 2 years post-operatively. Results A total of 42 patients with minimum 2 years follow-up were included in this study. There were 12 male and 30 female patients, and the cohort had a mean age of 74 (4) years. Mean tendon thickness measured was 5.3 (1.7) mm, and mean tear size was 1.5 (0.7) cm. Regression analysis revealed that tendon thickness had no effect on VAS, CMS, UCLA, and OSS scores at 2 years post-operatively. All clinical scores (VAS, CMS, USS, and OSS) improved significantly at 1 year post-operatively (p<0.05) when compared to pre-operative values, and all improvement in scores met the minimal clinically important differences (MCID) established in previous studies. While these scores continued to improve from 1 to 2 years post-operatively, the differences detected were no longer statistically significant (p>0.05). Discussion Arthroscopic cuff repairs result in excellent clinical outcomes for small to medium sized tears in elderly patients aged 65 and above, with clinically important improvements in VAS, CMS, UCLA and OSS scores seen at 1 year post-operatively. Contrary to our hypothesis, tendon thickness did not appear to have any effect on clinical outcomes at 2 years post-operatively. However, post-operative sonographic evaluation may shed further light on whether cuff thickness plays a role in tendon healing and retear rates, which are known to have poor correlation with clinical outcomes as well.

Category: Shoulder - Rotator Cuff

Arthroscopic Single-Stage Capsular Release and Rotator Cuff Repair for Cuff Tears With Concomitant Stiffness. A Comparative Analysis of Functional and Radiological Outcomes

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Summary:

Single-STAGE ARTHROSCOPIC REPAIR AND CAPSULAR RELEASE FOR ROTATOR CUFF TEARS WITH STIFFNESS RESULTS IN A GOOD CLINICAL AND RADILOGICAL OUTCOME WITH COMPARABLE RETEARS IN BOTH GROUPS

Data:
Introduction There has been limited literature comparing the outcomes of concomitant treatment of rotator cuff tears with stiffness using a single-stage operative procedure. Our study aimed to analyse the functional outcomes & retear rates after a single-stage arthroscopic capsular release(ACR) & cuff repair for patients with cuff tear & stiffness by conducting a matched cohort analysis with cuff repairs without stiffness. Materials and Methods Patients who presented with full-thickness rotator cuff tears & concomitant stiffness were included in the study(Group I)(n=19). Clinical assessment was done in terms of range of motion (ROM), Visual analogue score (VAS), Constant score & American Shoulder Elbow Surgeons (ASES) scores. Group I was compared to a matched cohort of patients undergoing cuff repair without stiffness during the same study period(Group II)(n=38). MRI analysis was done at one year postoperatively to assess healing of the cuff. Results: 19/41 patients in group I with a mean follow-up of 27.3(±14.2) months were compared to 38/420 in group II patients at a mean follow-up of 35(±8.1) months. All parameters improved significantly postoperatively & were comparable in both groups though recovery was slower in Group I. We had 3/19(15.8%) & 8/41(21%) retears in Group I & II respectively, however this difference was not statistically significant. Conclusion: Single-stage arthroscopic repair and capsular release for rotator cuff tears with stiffness results in a good clinical and radiological outcome. Retear rates are comparable to cuff tears without stiffness.

Effect Of Bone Marrow Aspirate Concentrate With Different Carriers For The Regeneration Of Tendon In A Chronic Rotator Cuff Tear Model Of Rabbit

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Summary:
BMAC with two different carriers could effectively achieve the multi-lineage differentiations and gene expressions, compared to those without carrier, at the early phase. However, the combination of BMAC and atelocollagen finally had more superior tendon-to-bone healing effects in a RCT model of rabbit.

Data:
Background: Even though bone marrow aspirate concentrates (BMAC) was investigated to promote tendon-to-bone healing in animal and human study, it is still debatable whether stem/progenitor cells could maintain the biological stability without any carrier environment. This study was designed to evaluate the effect of bone marrow aspirate concentrate with different carriers for the