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Introduction: Recent studies have raised concerns over accuracy of suture passage during arthroscopic remplissage. Our purpose was to validate if a previously described "safe zone" technique (SZ) for remplissage suture placement can improve accuracy of suture passage through the infraspinatus tendon.
Methods: An arthroscopic remplissage was performed on 6 cadaveric specimens using a recommended "safe zone" suture passage technique, described as a region at least 1 cm lateral to the posterolateral acromion (PLA) and no greater than 3 cm distal. Two anchors were placed following, which sutures were shuttled through the posterior rotator cuff arthroscopically. Specimens were then dissected to analyze the accuracy of suture passage. Results were compared with a control group of 6 separate specimens where suture passage was done with standard techniques without use of the "safe zone" (SZ).
Results: A total of 24 suture passes were performed for each group. 83.3% (20/24) passed through the infraspinatus tendon in the SZ group. This was significantly improved compared with the control group where only 25% (6/24) pierced through the infraspinatus tendon ($p<0.01$). 4.2% (1/24) of attempted passes in the SZ group passed through the muscle or musculotendinous junction compared with 75% (18/24) in the control group ($p<0.01$). Prevention of over-medialization significantly improved using the SZ as represented by both anchors having suture passage significantly more lateral (6-10mm) than the control group ($p<0.01$). There was also an improvement in the precision of suture passes with utilization of the SZ, as overall precision (SD) improved in 75% of passes.
Conclusion: We found the safe zone technique significantly improved accuracy of suture penetration into the infraspinatus tendon during arthroscopic remplissage. This technique also prevents over-medialization with regards to muscle penetration and over-distalization caused by teres minor penetration. The safe zone technique provides a reproducible method that may prove useful to prevent reported complications associated with remplissage.

Arthroscopic Superior Capsular Reconstruction for the Treatment of Massive Irreparable Rotator Cuff Tears in the Active Patient: 1-2 year Results

SS-06
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Introduction: To report our results in the first 58 shoulders in 57 patients undergoing arthroscopic superior capsular reconstruction for the treatment of the younger active patient with irreparable rotator cuff tears and rotator cuff arthropathy.
Methods: 57 consecutive patients presented with massive irreparable rotator cuff tear with retraction and atrophy (Goutallier grade 4). One patient has undergone bilateral arthroscopic superior capsular reconstruction. All had failed previous treatments including surgical and non-surgical modalities. These patients were too young and active (ages 42-67) for treatment with reverse total shoulder arthroplasty. All patients had unacceptable pain and weakness. The tears involved the supraspinatus or both supraspinatus and infraspinatus tendons. All patients were treated with arthroscopic superior capsular reconstruction with an acellular dermal allograft. Evaluation utilizing an internet based outcome tracking system, radiographic analysis and functional assessment to assess range of motion and dynamometric strength data utilized to track outcomes.
Results: At minimum of one year follow up, 56/57 shoulders are satisfied. One shoulder went on to revision to reverse total shoulder arthroplasty. Outcome data analysis demonstrated significantly improved scores in visual analog scores (3.6 to 1.3), Simple shoulder test (39 to 64), SANE Scores (31 to 65), ASES Function scores (14 to 21), and ASES Index scores (45 to 64) at minimal one year follow up. Active range of motion measurements in forward flexion and abduction as well as dynamometric strength measures have shown significant improvement as well. Radiographic analysis demonstrated significant improvement in acromiohumeral distance that was maintained over the postoperative period (1 to 2 years).
Conclusion: Arthroscopic superior capsular reconstruction with acellular dermal allograft has been a successful procedure in decreasing pain and improving function during this early postoperative period. As this procedure "burns no bridges", it is an attractive alternative to reverse total shoulder arthroplasty in the young active patient population.

Arthroscopic Superior Capsule Reconstruction (ASCR) vs. Latissimus Dorsi Transfer (LDT): a comparison of early clinical outcomes

SS-07
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Introduction: Arthroscopic superior capsule reconstruction (ASCR) has recently been introduced as an alternative to latissimus dorsi transfer (LDT) for treatment of irreparable rotator cuff tears in young patients. Our hypothesis was preliminary clinical outcomes for patients undergoing ASCR would not significantly differ from those of LDT patients for irreparable tears.
Methods: Patients who underwent either a LDT or ASCR with a minimum follow-up of 6 months (mean 26 month, range 6-92 month) were included. In the ASCR technique, a 3-mm acellular human dermal allograft was individually