

ARTHROSCOPIC SUBSCAPULARIS TENDON REPAIR: NEW TRANSOSSEOUS SUTURE REPAIR TECHNIQUE AND PRELIMINARY RESULTS

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Aim

Reduction and fixation of subscapular tendon tears appears to be technically challenging. This study aims to describe a new arthroscopic transosseous repair of the subscapularis: a procedure of subscapularis tendon repair performed with the aid of a suture passing wire and Giant needle transosseous suturing as described by the second Author. Our objective was to evaluate the preliminary results of 8 consecutive arthroscopic subscapularis tendon repairs. To our knowledge there is no technique of arthroscopic transosseous repair of the subscapularis described in the literature.

ARTHROSCOPIC TRANSOSSEOUS SUBSCAPULARIS REPAIR

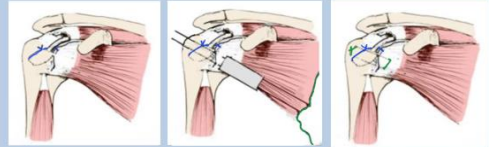


1- Subscapularis complete tear at its insertion

2- Passing a transosseous suture Infront of the Biceps tendon using the Giant Needle Technique

3- Pass a Chop Needle Puller through the Skin, the upper lateral corner of the torn subscapularis and pull the Suture immediately above its entrance in the bone

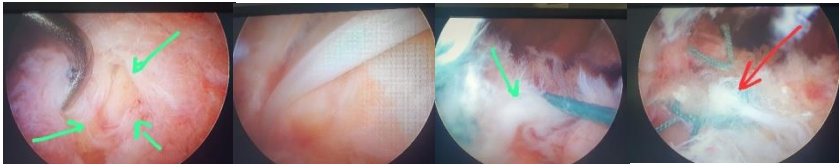
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4- Tie the suture using a sliding Knot technique (I use the Giant Knot)

5- Pass two Wire Suture Passers halfway through a large Cannula then pass one suture through both ends and pull them posteriorly

6- Tie the mattress suture from a posterior portal to secure the tendon fixation



On the left the lower end of the torn subscapularis (Green Arrows) and on the right the upper end

The upper two suture fixation of the tendon (Green Arrow) and Mattress suture fixation (Green Arrow)

Methods

All 8 shoulders had longer than 3 months follow-up, with an average of 18 months (range, 3 to 37 months). The average age was 61years (range, 41 to 75 years). The average time from onset of symptoms to surgery was 3.2 months (range, 1 to 5 months). The shoulders were evaluated using a modified UCLA score, Napoleon test, lift-off test, radiographs, and magnetic resonance imaging (MRI). Indications for surgery included clinical and/or MRI evidence of a rotator cuff tear. An arthroscopic transosseous repair suture technique was used for repair.

Results

UCLA scores increased from a preoperative average of 11.6 to a postoperative average of 30.6 ($P < .0001$). By UCLA criteria, excellent and good results were obtained in seven patient and 1 fair result. Forward flexion increased from an average 100.3 degrees preoperatively to an average 175.1 degrees postoperatively ($P = .0016$). 5 patients had isolated tears of the subscapularis. The remaining 3 patients had associated supraspinatus tear. 3 patients had proximal migration of the humerus preoperatively. Postoperative no migration was present, and the Napoleon test was negative in 7 and weak in one. The postoperative rehabilitation was more difficult the isolated supraspinatus tear in gaining active and passive range of motion.

Conclusions

We have been able to consistently perform arthroscopic repair of torn subscapularis tendons, with good and excellent results, in all of the 8 patients. Repair of The Arthroscopic repair of combined tears of the subscapularis, supraspinatus can produce durable reversal of proximal humeral migration and restoration of overhead function.