



Outcome of Revision of Failed Rotator Cuff Repair; Arthroscopic Anchor Removal And Transosseous Reconstruction

Sherif Elgamry MD, Basim Fleega MD
Shoulder Service , Global Orthopedic Clinic, Giza, Cairo, EGYPT

Aim

Revision of failed arthroscopic rotator cuff repair done with anchor fixation is a difficult problem facing the surgeon. This study will report the technical challenge and the outcome of arthroscopic anchor removal and transosseous tendon repair as well as the clinical outcome after surgery.

It is generally accepted that rotator cuff repair gives satisfactory results.

Recurrent tear after rotator cuff repair is common. The failure rates among surgeons have been reported to range from 11% to 94%. Revision rotator cuff repair is made technically more difficult by retained suture and suture anchor material.

Signs TO DO Arthroscopic Surgery

for Large, Massive and Revision RCT and cases planed for rTSA

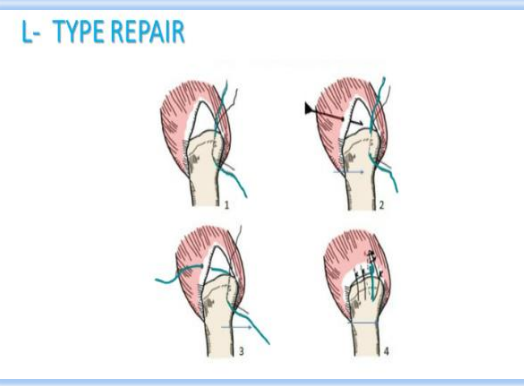
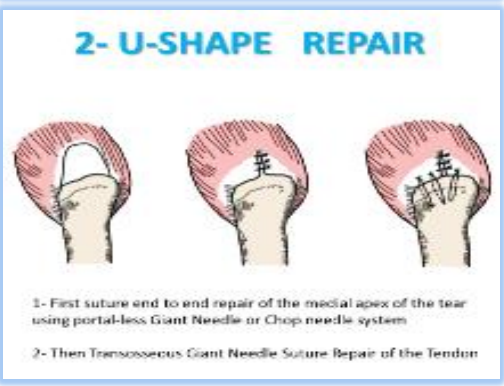
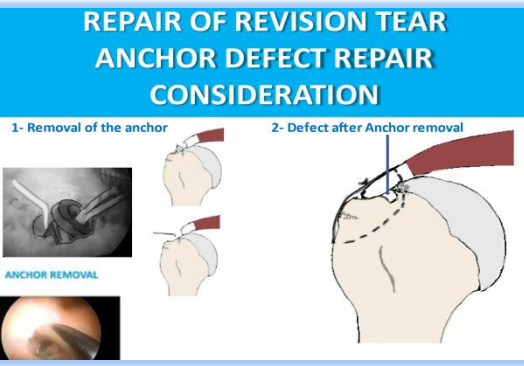
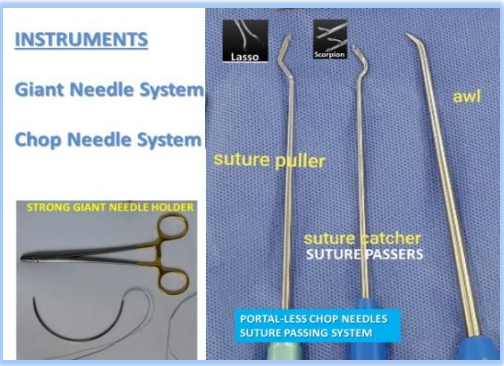
1- Active elevation sign (>60 degrees)

2- NO Active elevation + one or more of these

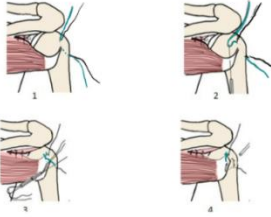
- Good mass of the retracted Supraspinatus on MRI
- Presence of the Biceps and Subscapularis
- Presence of the Biceps and Infraspinatus
- Both Subscapularis and Infraspinatus are present with or without Biceps

Methods

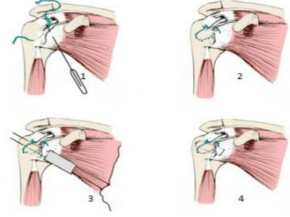
Presented will be the technique of removing the anchors without damaging the bone and transosseous giant needle fixation of the tendon to the footprint area. 42 cases of failed arthroscopic rotator cuff repair were treated between 2015 and 2019 by one surgeon in two centers. There were 20 males and 22 females with an average age of 50 years (between 18 and 79). 22 of the failed cases were repaired using double row anchor fixation in 20 and single row in 22. In 5 cases absorbable anchors were used. The size of the recurrent tear was 16 small, 16 medium and 10 large. Eight cases couldn't actively elevate the shoulder above 70° and six had no active external rotation. Arthroscopic anchor removal was done in 25 cases and a transosseous repair was done in 38 cases. Two cases of rotator cuff arthropathy, one case of massive irreparable tear and one case of post infection osteoarthritis were not repaired. We were able evaluate 34 of the 38 cases treated with arthroscopic transosseous repair, with an average follow up of 31 months (between one and four years).



Transosseous Infrapinatus repair in Massive tear



SUBSCAPULARIS REPAIR



MASSIVE WITHOUT BICEPS

BEFORE REPAIR

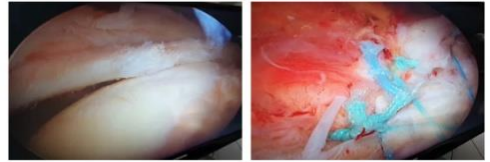
AFTER REPAIR



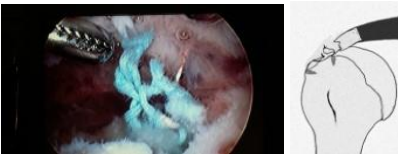
LARGE TEAR WITH PRESENCE OF THE BICEPS

BEFORE REPAIR

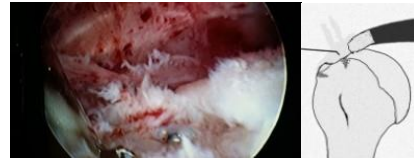
AFTER REPAIR



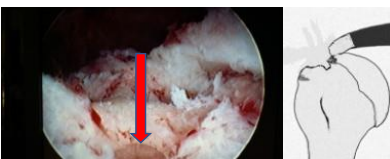
ARTHROSCOPIC TRANSOSSEOUS TENDON REPAIR AFTER REMOVAL OF THE ANCHORS



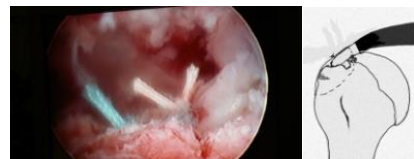
Recurrent rotator cuff tear After removal of the floating suture



ures



Holes in the Tuberosity after Anchor removal



After Giant Needle transosseous tendon repair

Results

The postoperative rehabilitation took 4 months to one year. The range of motion passive motion range in all cases was normal. The strength varied from equal strength to 70% weakness compared to the opposite normal side. Active elevation and external rotation was possible in all cases except four. No patient was complaining of pain. The x-rays done six months after surgery showed filling of the empty bone spaces, where the anchors were inserted. According to Neer score 68% of the cases were rated excellent 23% satisfactory and 9% unsatisfactory.

42 FAILED ROTATOR CUFF TEAR REPAIR; ARTHROSCOPIC RECONSTRUCTION

42 cases of large and massive tears out of 4 failed rotator cuff repairs

reoperated bet. 8-2015 and 1-2019

AVERAGE AGE 50Y

38/42 cases had transosseous arthroscopic reconstruction

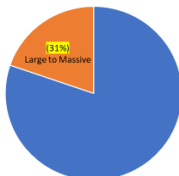
FOLLOW UP

bet. 12 to 48M (Average 31 M)

RESULTS

Av. Constant score : GOOD (88 points)

Av. ASES (Neer) score: SATISFACTORY



SUMMARY 13 CASES REVISION MASSIVE TEARS

Operated 2017-2021

5 male and 8 female

All Dominant side

15% single row,

85% double row

12 metal, 1 absorb.

3-8 Anchors, Au/case

Av time 1 to 2 Op.

24M (6M-10Y)

TREATMENT: 11 (TD-R)

2 (TSA)

2 (TSR)

RESULTS

Av Constant score 78

Av Neer score Satisfactory

	G	side	Tech	anch	Nc.	1surgery	2surgery	Pre E/ER	Post	FLI
1	M	R	DR	ma	2	5.2017	3.2018	70/60	180/60	TON 36
2	F	R	SR	ma	3	4.2017	2.2018	90/0	160/50	TON 30
3	M	R	DR	ma	4	4.2017	10.2017	40/0	160/40	TON 35
4	M	R	DR	ma	4	2.2016	4.2017	90/60	180/60	TON 34
5	F	R	DR	ma	2	2.2016	8.2017	70/40	175/70	TON 33
6	F	R	DR	ma	4	12.2015	4.2016	60/30	170/50	TON 33
7	F	R	DR	ma	6	6.2015	10.2016	60/0	160/40	TON 33
8	F	R	DR	ma	4	2.2015	10.2015	20/20	180/60	TON 40
9	F	R	DR	ma	6	5.2013	1.2014	100/40	180/60	TON 40
10	M	R	DR	ma	2	2.2015	4.2019	70/30	180/70	TON 48
11	M	L	DR	ma	4	2.2014	5.2019	120/40	180/60	TON 6
12	F	R	DR	ma	6	7.2012	10.2020	70/0	170/50	TON 10
13	F	R	SR	aa	3	6.2020	1.2021	70/20	180/60	TON 6

Conclusions

The clinical and radiographic result strongly encourage using the arthroscopic transosseous suture fixation techniques for revision rotator cuff repair done with anchor tendon fixation. Age or osteoporosis is not a contraindication.