

Massive Rotator Cuff Tear (RCT) treated by McLaughlin Procedure

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● **Treatment for Massive Rotator cuff**

1. **McLaughlin's procedure** McLaughlin et al. 1951
2. **Repair to the proximal site** McLaughlin et al. 1962
3. **Advancement of SSP origin** Debeyre et al. 1965
4. **Transposition of muscle**
 Subscapularis, Teres minor
5. **Tendon transfer**
 Deltoid, Trapezius, Latismus dorsi
6. **Tendon substitution**
 Autograft
 Allograft
 Prosthetic material
7. **Debridement only**

● **Rotator cuff repair (1980. 8-2000. 9) in Kobe University Hospital**

Operated by either Dr. K.F. or Dr. K.M.

Total number of operation: 85 shoulders in 80 cases

Massive rotator cuff tear: 24 shoulders in 24 cases

Follow up: 22 shoulders in 22 cases (19 men, 3 women)

Age 62.1 y/o (41-76) Follow up period: 2y 2m (6m-8y)

● **Surgical technique**

1. **Mobilize the residual tendon**

Extensive release of adhesive bursae

2. **Repair to the bone trough**

- a) At the original insertion at side
 at abd.

b) At the proximal to the original insertion

3. Residual defect

Anchoring to the biceps long head

● Postoperative Rehabilitation protocol

1. Abduction brace : Week 0-6

90° elevation: Week 0-3

70° elevation: Week 3-4

50° elevation: Week 4-5

30° elevation: Week 5-6

2. Passive ROM exercise: Week 0-3

3. Active ROM exercise: Week 4 -

4. Resisted muscle exercise: 3 Months -

● Clinical results

1. JOA score

Total	pre operation: 57.0 pts	post operation: 88.2 pts
	(Excellent: 14 Good: 5 Fair: 1 Poor: 2)	
Pain	pre operation: 9.3 pts	post operation: 27.6 pts
Function	pre operation: 10.5 pts	post operation: 17.6 pts

2. ROM

Flexion	pre operation: 102.3°	post operation: 157.3°
Abduction	pre operation: 90.9°	post operation: 156.6°
External rot.	pre operation: 33.6°	post operation: 24.8°

3. MMT

SSP	pre operation: 3.6	post operation: 4.2
ER	pre operation: 3.5	post operation: 3.8

● Residual defect

Postoperative arthrogram or MRI in 13 cases

9 shoulders had a residual defect: 69.2%

● Discussion

1. Repairing the tear is not equal to covering the defect

2. Complete water tight closure in not essential

Calvert et al. : 1986

Yoshimine et al : 1996

Fujita et al. : 1997

3. Poor cases

Active elevation: 20° / Passive elevation: 135°

Hold the arm in elevation: impossible

Atrophy of the deltoid: yes

● Summary

1. Direct repair of massive rotator cuff tear is doable.
2. Clinical results of direct repair of massive rotator cuff tear was satisfactory.
3. Function of the deltoid is one of the most important factors to get good clinical results.