

Arthroscopic Transglenoid Reconstruction

변 기 용

충남대학 의과대학 정형외과학교실

I. Spectrum of capsulolabral pathology in shoulder instability

- 1) SLAP lesion : Tear in Superior Labrum from Anterior to Posterior
- 2) Bankart lesion : Avulsion or stripping of anterior inferior glenohumeral ligament from glenoid
- 3) ALPSA lesion : Anterior Labroligamentous Periosteal Sleeve Avulsion
- 4) Capsular tear
- 5) HAGL lesion : Humeral Avulsion of the Glenohumeral Ligament
- 6) Perthes lesion
- 7) Glenoid rim fracture
- 8) Rotator capsular interval enlargement

II. Classification

1) SLAP

a) synders classification

Type I

- Fraying degenerative sup. labrum
- Intact labral edge and biceps tendon anchor

Type II

- Detachment of biceps anchor from glenoid
- Labrum-biceps complex arches away from underlying glenoid

Type III

- Bucket-handle tear, but with an intact biceps-labral complex

Type IV

- Bucket-handle tear of sup. labrum which extend into biceps tendon
- Split or displacement of biceps tendon

Complex

- Combination of previous type

b) Rhees classification of SLAP

Type I

- Intact biceps tendon
- flaps, degenerative, bucket handle tear or split biceps

Type II

- Disturbed biceps anchor

Type III

- Tpe I + Type II

2) Bankart classification (Rhees classification)

Bankart lesion into 4 type according to

- : extent of capsulolabral detachment
- : associate glenoid rim fracture and SLAP TYPE II lesion

Subgroup B : coexistence of capsular laxity

Type I a : separation of labrum and IGHL from the glenoid rim and scapular neck
(classic Bankart lesion)

II b : with capsular laxity

Type II a : separation of labrum with glenoid rim fracture

II b : with capsular laxity

Type III a : above type I or II with SLAP type II

III b : with capsular laxity

Type IV a : deficient labrum with detached loose IGHL from scapular neck

IV b : with capsular laxity

III. Treatment

1) Treatment of SLAP

- Type I
 - Debride labrum
- Type II
 - debride labrum
 - decorticate superior glenoid neck
 - fixation device or suture
- Type III
 - resection of the Bucket handle tear
- Type IV
 - resection of torn labrum and biceps tendon
 - biceps tenodesis or suture repair

2) Transglenoid suture technique for SLAP Type II (Rhee' s method, 1993)

- 2 stitches :

post. labrum _____> drill holes (12:30 – 1:00)
biceps tendon

- 2 stitches :

ant. labrum _____> drill holes (1:00 – 1:30)
biceps tendon

3) Steps in repairing the type II SLAP lesion

- ① Standard anterior and posterior portals
anterior : just behind the biceps tendon
- ② Debride degenerative labral and biceps tendon
- ③ Lightly abrade superior rim of glenoid neck adjacent to articular cartilage
- ④ 2 anterior sutures on labrum and biceps
2 posterior sutures on labrum and biceps by suture hooks
Pass anterior and posterior two sutures through transglenoid with Beath pin
- ⑥ Tie on the back of scapula (spine of scapula)

4) Surgical procedure of modified transglenoid bankart reconstruction

- ① Debridement of frayed labrum
- ② Periosteal stripping and elevation (Rt shoulder 3:00 to 6:30)
- ③ Glenoid rim abrasion until active bleeding : improve healing
- ④ Capsular plication, advancement or shift with multiple suture (6 to 8 stitch # 0 PDS) using suture hook beath pin drilling with special guide
- ⑤ Suture tie on the back of the scapular

5) Postoperative Care

Shoulder immobilizer or sling for 6 weeks

Full ROM at 12 weeks

Overhead action at 6 months

Athletes should avoid contact and collision sports for 1 year

IV. Transglenoid Reconstruction

1) Advantages

- ① No hardware problem
- ② Reasonable recurrence rate by skilled surgeons
- ③ Few complication
- ④ Easy to revise of failed open repair
- ⑤ Reconstruction of any type of capsulolabral lesion include SLAP II
- ⑥ Capsular plication ,advancement and shift : possible

2) Disadvantages

- ① Sometimes loosening of suture tie
- ② Possible of suprascapular nerve injury
- ③ Cannot use nonabsorbable suture material

3) Prevention of Disadvantage

Suture tie : two hole technique & anchoring on bone of scapula or spine of scapular with knot
pusher

Possible suprascapular nerve injury : direction & site of pinning is very important

Use special guide system

V. Result

1) Result according to Rowe rating scale

	Satisfaction rate
Transglenoid suture technique in SLAP Type II	27/30 (90.0%)
Transglenoid suture technique in TUBS	126/134 (94.2%)
Transglenoid suture technique in AMBR II	15/18 (90.9%)
Transglenoid suture technique in ALPSA	30/32 (93.8%)

VI. Conclusion

Arthroscopic transglenoid suture technique is a very useful method for various pathology of shoulder instability and SLAP lesion