

〈심포지움 II 16:00~16:12〉

Arthroscopic Treatment of SLAP Lesion (Type II)

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충남의대

I. Definition

SLAP (Snyder S J)

- tear in Superior Labrum from Anterior to posterior
- rare - 27/7000 shoulder arthroscopy by Snyder at Karzel

Glenoid labrum

- primary attachment for glenohumeral ligaments and biceps superiorly
- significant anatomic variant around the periphery
 - loosely attached superiorly
 - tightly attached inferiorly
- labrum increases the depth of glenoid cavity by 50%

Factors predisposing superior labrum to injury

- biceps anchors : large force through biceps cause pathology
- poor vascularity of superior labrum
 - poor healing
- continued pull of biceps
 - prevent healing

II. Classification

Type I

- Fraying and 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
- spilt or displacement of biceps tendon

Complex

- combination of previous type

III. Mechanism of Injury(Snyder S J)

- Fall onto an outstretched arm
- Sudden pull on the arm
- Repeated trauma or tension
- Degenerating due to age
- Hyperflexion injury (Paulos in gymnasts)

IV. Diagnosis

- History
 - Nonspecific
- Physical Examination
 - Nonspecific

History and Examination

- nonspecific shoulder pain increased with overhead activities
- may complain of catching or popping
- pain to resisted biceps contraction
- painful click or catching
- exclude other diagnosis

Associated lesions

- Rotator cuff tear
- Loose bodies
- Bankart lesion
- chondromalacia
- biceps tendon tear
- Impingement syndrome

V. Treatment of SLAP lesion

• Type I

-Debride labrum

• Type II

-debride labrum

-a made 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

Suture method in SLAP Type II

• Scope method

-Direct fixation

: Suretec, Revomini (Synder)

Transglenoid Technique (Rhee)

• Scalpel : ???

Transglenoid suture technique for SLAP Type II

(Rhee' s method, 1993)

• 2 stiches :

post. labrum

biceps tendon

▶ drill holes (12:30 - 1:30)

• 2 stiches :

ant. labrum

biceps tendon

▶ drill holes (1:00 - 2:00)

Cadaveric studies for prevention of suprascapular N. injury

(K. J. Rhee, 1997)

• In SLAP Type II repair

-Site : Rt - 2, just above 2 o clock

Lt - 10, just above 10 o clock

- Direction : parallel to glenoid cavity & slightly superior in horizontal plane
- Tying site in SLAP type II repair : lateral side on scapula spine

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

VI. Author's experience

Patient Demographics

- Incidentally found 56 patients of SLAP lesion for arthroscopic treatment of recurrent shoulder D/L, impingement syndrome or SLAP (168 patients)
- from March 1989 to January 1997 in CNUH
- Average follow-up : 36 months (range, 12 to 72)
- Male/Female ratio - 52 : 4
- Average age : 26 yrs. (range, 16 - 64)
- Average time from injury to surgery : 28 months

Initial Dx(▶ found SLAP II lesion)

- Impingement : 31 ▶ 7
- shoulder instability : 124 ▶ 36
- SLAP : 13 ▶ 13

Mechanism of injury

- Trauma : 48 Patients
- No specific accident : 8 Patients.

MR-Arthrography for SLAP lesion (CNUH)

- Sensitivity : 71 %
- Specificity : 60 %

Author's Treatment

- Type I or III
 - Debridement
- Type II or IV
 1. Suture fixation
 2. with Bankart lesion
 - extended multiple suture

Author's Treatment cases

- Suture fixation : 42 cases
- Biodegradable tack : 5 cases
- metal implant : 3 cases
- knotless anchor : 6 cases

Repair of type II SLAP lesions through transglenoid suture technique

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
- ⑤ Pass anterior two sutures : through transglenoid
pass posterior two sutures : transscapular with Beath pin
- ⑥ tie on the back of scapula (spine of scapula)

Result

- Associate pathology
- | | |
|---------------------|----|
| RC tear | 7 |
| Shouldr instability | 36 |

Result according to individual Tx.

- Suture fixation : satisfaction - 40/42
- Biodegradable tack : satisfaction - 3 / 5

- metal implant : satisfaction - 1 / 3
- knotless anchor : satisfaction - 4 / 6

VII. Discussion

- Sole SLAP type II : ant. subluxation
- Bankart lesion with SLAP type II
 - recurrent subluxation after Bankart repair only
- SLAP tpe II is the one etiology of subluxation of shoulder
- The type II SLAP lesion in frequently associated with Bankart lesion in anterior instability (TUBS)
- Arthroscopic fixation of superior labrum and Biceps tendon by transglenoid technique is one of the acceptable method

SLAP lesion

- Increasing incidence of combination with bankart lesion by arthroscopy

Arthroscopic evaluation

- Avoid overdiagnosis : normal anatomy
- Type I increase progressively with age
- Look for evidence of trauma

VIII. Conclusion

- In previous report, the SLAP II lesion is quite rare in diagnostic arthroscope, but our study reveals that these lesion is not uncommon in instability or impingement of shoulder