

REHABILITATION PROGRAM AFTER REPAIR OF S.L.A.P. LESIONS

Introduction

Lesions of the superior labrum in high level throwing athletes were first described by Andrews in 1985. In 1990, Snyder gave a detailed classification of these lesions and coined the term, Superior Labrum Anterior Posterior (SLAP) lesion. In a Type I SLAP lesion the labrum is frayed and degenerated but remains intact to the glenoid; the biceps anchor is also intact. Type II lesions have a detachment of the labrum and biceps anchor from the superior glenoid. Type III lesions are similar to bucket-handle meniscal tears of the knee. The labrum is torn away, however the biceps anchor and remaining labrum are still attached to the glenoid. In Type IV lesions the bucket-handle tear of the labrum extends into the biceps anchor.

Diagnosis and Treatment

The diagnosis can often be very difficult. The mechanism of injury is usually traction or compression of the superior joint surface. Unfortunately, there are not any specific physical findings; most described tests are non-specific but can still be helpful. MRI and other radiologic tests have limited diagnostic accuracy which is highly dependent on study quality & expertise of the radiologist. Type I and III tears are treated with debridement alone while Type II and IV tears require repair. This repair is performed arthroscopically with suture anchors and/or tacks.

Rehabilitation

The following is a general guide for the rehabilitation of isolated SLAP Lesion repairs.

Patients who undergo concomitant procedures will require modification of the protocol.

As always, progression through the Phases is individualized for each patient and a successful outcome is dependent on adequate communication between the patient, therapist and surgeon.

PHASE I: Immediate postoperative phase

Goals: Protect the surgical procedure

Minimize the effects of immobilization

Diminish pain and inflammation

Weeks 0-3

- **Sling** for 1 week, then use for comfort as needed
- Elbow/hand ROM & Gripping exercises
- Codman's pendulum exercises
- **PROM and AAROM** for flexion and abduction as tolerated and ER to 30 at neutral

- **No shoulder extension or Combined Abduction/ER**
- Submaximal isometrics (NO BICEPS STRENGTHENING)
- Cryotherapy, modalities as needed to control pain and swelling
- Scapular shrugs, protraction and retraction

Weeks 3-6

- AAROM & PROM
 - Full Flexion as tolerated
 - ER in scapular plane to 45° & progress to full by 6wks
 - IR in scapular plane progress to full as tolerated
 - Abduction to full as tolerated
 - No shoulder extension or Combined Abduction/ER**
- Continue isometrics (NO BICEPS STRENGTHENING)
- Begin submaximal dynamic stabilization

Weeks 6-10

- May begin extension
- Should gain full ROM
- Joint mobilization, stretching, etc.
- Self-capsular stretching
- UBE arm at 90 degrees abduction
- Continue PNF **diagonal patterns** (rhythmic stabilization techniques)
- Progressive isotonic strengthening
- Begin biceps isometrics at 6 weeks and progressive isotonic at 8 weeks

PHASE II: Intermediate phase

Goals: Normalize arthrokinematics

Improve muscular strength

Enhance neuromuscular control

Weeks 10-14

- Continue all stretching exercises
 - Joint mobilization, capsular stretching, passive and active stretching
- Continue strengthening exercises
 - Throwers Ten Program
 - Isotonic strengthening for entire shoulder complex
 - PNF manual technique
 - Neuromuscular **control** drills
 - Isokinetic** strengthening
- Begin sports specific exercises
- Initiate progressive **plyometric** exercises

- May initiate “controlled” swimming, golf swings, etc.
- Progressive **isotonic** machine weight training

PHASE III: Advanced strengthening phase

Goals: Enhance muscular strength, power and endurance

Improve muscular endurance

Maintain mobility

Criteria to enter Phase III:

- 1) Full range of motion
 - 2) No pain or tenderness
 - 3) Strength 70-80% of contralateral side
- Continue all flexibility exercises
 - Self-capsular stretches (anterior, posterior and inferior)
 - Maintain ER flexibility
 - Continue isotonic strengthening program
 - Emphasize muscular balance (ER/IR)
 - Continue PNF manual resistance
 - Continue plyometrics
 - **Interval throwing program**
 - **Functional progression**

PHASE IV: Return to sports (unrestricted)

Criteria to enter Phase IV:

- 1) Full nonpainful ROM
- 2) Satisfactory strength (isokinetics)
- 3) No pain or tenderness
- 4) Satisfactory functional progression

Exercises:

- Continue capsular stretching to maintain mobility
 - Continue strengthening program
- Either Thrower’s Ten or fundamental shoulder-exercise program
ER=external rotation; IR=internal rotation; PNF=proprioceptive neuromuscular facilitation; ROM=range of motion; UBE=upper body ergometer.