Arthroscopic Repair of Superior Labral Anterior-Posterior (SLAP) Injuries- Dr. Trueblood

Indications: Pain and disability of the shoulder secondary to the detachment of the long head of the biceps origin and adjacent glenoid labrum in a young (<35 physiologically) individual that persists despite activity modification and physical therapy.

Procedure: The patient is taken to the operating room where they are placed in the beachchair position. The procedure begins with diagnostic arthroscopy via a posterior glenohumeral portal. The biceps anchor is inspected and its stability tested with a probes placed both anteriorly and in an anterolateral position. When tears are identified, the remaining tissues are gently debrided back to healthy tissue and the, now bare, glenoid rim is prepared back to a bleeding, bone surface. Number 2 weight Fiberwire sutures are then passed through the labral tissue and are then impacted into the bone using a knotless technique. This is chosen to prevent the presence of intra-articular suture after surgery. Care is taken to avoid excess tightening the extrinsic ligaments of the capsule by over-advancement of the labrum on the glenoid rim, a potential source of postoperative stiffness. The subacromial space is then inspected and a subacromial decompression performed, if indicated. The patient’s wounds are then closed with nylon suture and the operative arm placed into a sling. Patient’s are discharged to home with this sling, prescriptions for a narcotic pain medication and Compazine (an anti-emetic). They are also provided with a pump-cryotherapy unit and proper use of these modalities is demonstrated by the recovery room staff before discharge.

Postoperative Days 0-14
Start therapy at 3-5 days after surgery.
Physical Therapy 1-2x/ week for 6 weeks.

Review postoperative precautions with patient and care-partner.
- ADLs: Emphasize donning and doffing of shirts. Patient may remove sling for short periods to allow elbow to extend fully.
- No shoulder AROM.
- No lifting of objects
- When reclining or lying supine, the patient is encouraged to keep a pillow or blanket behind their elbow, preventing extension through the shoulder, to reduce stress on the anterior shoulder and subcoracoid space. This hurts. As a rule of thumb, the patient should always be able to see their elbow.
- No excessive shoulder motion beyond side pocket, especially into internal rotation (IR)
- No excessive stretching or sudden movements (particularly external rotation (ER))
- No supporting of body weight by hand or elbow on involved side
• May remove dressing and shower 4 days after surgery and may shower, letting water run over the skin and patting the wounds dry with a clean towel. No standing in a pool for 3 weeks. No swimming for 10 weeks.
• Recommend a clean t-shirt over the shoulder in lieu of band-aids after dressing change.
• No driving for at least 4 weeks

Therapy Program:
• Sling for 4 weeks—day and (especially) night.
• Wrist and Hand AROM/PROM
• Shoulder PROM:
  • Flexion and elevation in the plane of the scapula to 60° (week 2, flexion to 75°)
  • External rotation(ER)/internal rotation (IR) with arm in scapular plane
  • ER to 10°-15°
  • IR to 45°
• No AROM ER, extension, or abduction
• Submaximal isometrics for all rotator cuff, periscapular, and shoulder musculature
  o Scapular “Clock” Exercises
  o No isolated biceps contractions
• Encourage frequent use of cryotherapy cuff to minimize swelling and inflammation at the surgical site.
• Cryotherapy, E-stim, and other modalities as needed.
• HEP

First postoperative visit at 10-14 days:
☐ Wound check and stitch removal.
☐ Review postoperative restrictions/ activity modifications
☐ Pain Assessment/ Medication refills as needed.
☐ Physical Therapy prescription: continue by protocol.
☐ Work Note: No lifting, pushing, pulling with operative arm. 1# weight lifting. May not drive.
☐ Expected return to work:
  ☐ Cognitive/ Sedentary: 2 weeks
  ☐ Light-Medium Manual: 8 weeks
  ☐ Heavy Manual: 3-4 months

Weeks 3-4
• Continue gentle PROM exercises (Rate of progression based on patient’s tolerance)
  o Flexion and elevation in the plane of the scapula to 90°
  o Abduction to 75-85°
ER in scapular plane to 25-30°
IR in scapular plane to 55-60°

- No AROM
- Initiate proprioceptive training within above ROM
- Continue gentle isometrics as above
- Continue use of cryotherapy/modalities as indicated
- HEP

**Weeks 4-6**

- Discontinue use of sling at 4 weeks
- Begin AROM of shoulder (all planes)
  - Facilitate with “lawn chair progression”, advancing when mechanics are maintained through available range
- Gradually increase PROM and AROM
  - Flexion and elevation in the plane of the scapula to 145°
  - Abduction to 145°
  - External rotation 45-50° at 45° abduction
  - Internal rotation 55-60° at 45° abduction
  - Extension to tolerance
- Initiate unresisted, prone exercise program for periscapular musculature (Y-I-T)
- Begin AROM/ AAROM of elbow flexion and extension
- **NO BICEPS STRENGTHENING!**
- May start conditioning program for:
  - Trunk
    - no “behind-head” situps.
  - Lower extremities
  - Cardiovascular endurance (Okay to start elliptical/ exercise bike. Avoid treadmill and running.)

**2nd postoperative visit at 6 weeks:**
- Pain medication/ effectiveness
- Range of motion assessment
- Work restrictions
  - Type II SLAP: 5 pound lifting, no overhead lifting.
  - Type IV SLAP: No lifting, pushing, or pulling. No overhead lifting.
- Activity limitations documented for work/ sport activity
- May drive.
Weeks 7-9

- Progress AROM / PROM
  - Flexion, elevation in the plane of the scapula, and abduction to 180°
  - External rotation 90-95° at 90° abduction
  - Internal rotation 70-75° at 90° abduction
  - Extension to tolerance
- May add gentle glenohumeral and scapulothoracic mobilizations as needed.
  - Chronic scapular protraction is endemic in the SLAP tear population. Emphasize pec minor stretching. Modalities and massage as needed to facilitate.
- Begin rotator cuff and periscapular muscle strengthening.
  - Type II repairs: begin sub maximal pain free biceps isometrics
  - Type IV, and complex repairs: continue AROM elbow flexion and extension, no biceps isometric or isotonic strengthening
- HEP
  - Instruct in sleeper stretching.

Weeks 10-12

- Range of Motion
  - Progress ER AROM/ PROM to achieve thrower's motion
  - ER 110-115 at 90° abduction in throwing athletes (quarterbacks, pitchers, baseball players)
- Strengthening
  - Progress shoulder isotonic strengthening exercises as above
  - Continue all stretching exercises as need to maintain ROM.
- Strengthening:
  - Type II repairs: begin gentle resisted biceps isotonic strengthening @ week 12
  - Type IV, and complex repairs: begin gentle sub maximal pain free biceps isometrics

Next clinic visit 12 weeks after surgery:

- Review range of motion and strengthening progress-
  - Full, non-painful ROM
  - Muscular strength 4/5 or better
  - No pain or tenderness
- Pay attention particularly for pec minor tightness and rotator interval tightness (interferes with composite external rotation and abduction)
- Work/ sport restrictions
- Commonly return to unlimited waist height lifting, no overhead lifting.
Weeks 13-18
- Continue all stretching exercises (capsular and pec minor strengthening)
- Maintain thrower's motion (emphasize ER)
- Continue rotator cuff, periscapular, and shoulder strengthening exercises
  - Type II repairs: progress isotonic biceps strengthening as appropriate
  - Type IV, and complex repairs: start isotonic biceps strengthening
- Endurance training
- Initiate light plyometric program
- Restricted sports activities (light swimming, golfers may chip and putt)

Postoperative visit at 18 weeks:
- Review range of motion and functional strengthening progress.
- Full ROM
- Muscular strength ~80% of contralateral side
- Scapulohumeral rhythm
- Work/ sport restrictions
- Commonly return to unlimited overhead lifting. Consider work conditioning program for the very highest demand, overhead occupations.
- Advance to interval throwing program for sport.

Weeks 19-24 (HEP)
- Continue ROM exercises
- Continue isotonic strengthening program
- Plyometric strengthening
- Progress interval sports program. Advance to full participation in sport and work activities.