

## LATARJET REHAB GUIDELINES

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### Latarjet Procedure and Rehabilitation Considerations

#### Description of the problem:

Anterior dislocation of the glenohumeral joint can result in bony deficiency of the glenoid. When this anterior deficiency of bone exceeds ~20% of the glenoid width, there is increased incidence of recurrent dislocations. The Latarjet procedure is used to reconstruct the bony deficiency by transferring the coracoid process to the anterior glenoid.

#### Surgical Technique:

A deltopectoral open or an arthroscopic approach is used to expose the coracoid process. The coracoacromial ligament and pectoralis minor tendon are dissected from the coracoid. The coracoid process is osteotomized from the scapula anterior to the coracoclavicular ligaments, therefore retaining stability of the clavicle. The coracobrachialis and biceps short head (conjoined tendon) are left intact on the coracoid and serve as a soft tissue sling of support to the anterior joint when the arm is in abduction and external rotation. The subscapularis is split to expose the anterior glenoid. The joint capsule is opened, the coracoid graft is shaped to fill the anterior glenoid defect and is held in place with screw fixation (see Figure below). The deltopectoral and skin incisions are closed.

#### Potential Complications:

1. Risk of non-union of the coracoid graft to the glenoid (3%)
2. Screw discomfort/loosening (10%)
3. Musculocutaneous nerve damage, subscapularis dysfunction (rare)
4. Loss of external rotation (common, but preventable with therapy and HEP)
5. Increased risk of recurrent dislocation (15-20%)

#### Tissues to protect in healing phase (first 6 weeks):

1. Coracoid integration to glenoid: Prevent active pull from biceps short head (active elbow flexion) and passive pull of the conjoined tendon on the coracoid with extension of the shoulder posterior the frontal plane. Perform supported elbow flexion first 2 weeks, then active elbow flexion is ok but lifting nothing heavier than a coffee cup until after 6 weeks
2. Patients will wear sling 24/7 for first 2 weeks, and then only when out in community
3. Subscapularis dysfunction/scarring due to split: Frequent ER in scapular plane. **The transferred conjoint tendon cannot be allowed to scar to the subscapularis** (45 deg for first 2 weeks then as tolerated); ER(90) to begin after 6 weeks



These guidelines should be tailored to individual patients based on their rehab goals, age, precautions, quality of repair, etc. Progression should be based on patient progress and approval by the referring physician.

## **PHASE 1** **(0-2 weeks)**

### **GENERAL GUIDELINES AND PRECAUTIONS**

- Sling use 24/7 except for grooming and physical therapy several times daily
- Elbow flexion should be supported with well arm
- NO shoulder extension posterior the frontal plane (eg. No hand slide up spine/functional internal rotation)
- External and internal rotation in plane of the scapula in loose packed position, at around 30 degrees abduction; ER to 45 degrees is encouraged to prevent excessive scarring of Subscapularis split. **This exercise should be encouraged for at least 5x per day home program**
- Forward elevation is allowed as tolerated passive/supported on tabletop; to active assisted (supine cane) and active. Active motion only progresses when PROM is normalized
- May shower after 5 days with incision/portals uncovered; no submersion in bath/pool for a month

### **GOALS**

- Patient education about the nature of the surgery, associated precautions and expected rehabilitation progression
- Protect coracoid fixation and create an environment for optimal healing
- Avoid scarring of the subscapularis to the conjoint tendon by encouraging frequent ER
- Control pain, swelling and inflammation
- Achieve PROM limits established above (45 deg ER at 30 deg abduction in scapular plane)
- Establish stable scapula

### **EXERCISES**

- Pendulum (may be unsupported if elbow is allowed to extend slowly and with well-arm assistance); wrist flexion/extension; pronation/supination; grip
- Well arm supported elbow flexion/extension



- Scapular retraction to neutral
- Shoulder elevation as tolerated: table supported, to active assisted with cane
- External rotation in scapular plane at 30 deg abduction to 45 deg

#### **CRITERIA TO PROGRESS TO PHASE 2**

- Clearance from post op appointment with MD/PA/NP
- Pain well managed at less than 3/10

## **PHASE 2**

**(2-6 weeks)**

#### **GENERAL GUIDELINES AND PRECAUTIONS**

- May wean out of sling at home; continue to wear in community as sign of vulnerability to others; use of abduction pillow is not necessary
- May perform elbow flexion actively, but no resistance greater than a coffee cup
- No shoulder extension posterior the frontal plane (no functional IR behind back)
- May progress ER in loose packed position (30 degrees abduction in scapular plane) as tolerated

#### **GOALS**

- Continued protection of healing coracoid into the anterior glenoid rim
- Little to no pain
- Prevent stiffness, particularly for external rotation

#### **EXERCISES**

- Pendulum
- Elbow flexion/extension unsupported
- Scapular retraction to neutral
- Elevation and ER In loose packed position as tolerated – passive and active assisted and active all allowed; active ROM not to be initiated until PROM is fully restored
- External rotation and deltoid isometrics (no IR isometrics yet due to healing Subscapularis split)
- Posterior capsule stretches: cross body; modified sleeper stretch if tolerated

#### **CRITERIA TO PROGRESS TO PHASE 3**

- Pain well controlled
- ER in loose packed position is at least 45 deg

## **PHASE 3**

**(6-12 weeks)**

#### **GENERAL GUIDELINES AND PRECAUTIONS**

- May wean from sling completely (no more use, even in community)
- May begin to initiate extension posterior the frontal plane (eg. Hand behind the back stretch)
- May initiate ER in scapular plane at higher levels of abduction (45 deg and 90 deg)

- May initiate resistance to biceps – slow progression of loading
- Avoid pectoral muscle strength training until next phase so that can acquire full ER motion and rotator cuff/scapular strength to support the glenohumeral joint

### **GOALS**

- Full AROM in all planes with good mechanics
- Little to no pain that is low and transient with activity
- Gradual restoration of strength in biceps, rotator cuff, deltoid and scapular stabilizers

### **EXERCISES**

- End range stretching for IR/posterior capsule (hand slide up spine OK now without excessive force)
- ER stretching toward full range in scapular plane with arm at side, 45 deg and 90 deg (symmetry to uninvolved shoulder is goal, though may accept slight decrease in ER)
- Isolated glenohumeral elevation with blocked scapula to achieve near 120 deg; normalize forward elevation ROM passively and actively with good mechanics: supine to incline to vertical AROM
- Rotator cuff (IR, ER and scaption) and scapular strengthening with TheraBand, dumb bells, Body Blade
- May begin biceps curls with slow progressive resistance
- May resume jogging; leg press; squats with light hand weights

### **CRITERIA FOR RETURN TO WORK/SPORT**

- Sufficient ROM and strength for job/sport demand
- Discuss with surgeon and therapist

## **PHASE 4**

**(12 weeks +)**

### **GENERAL GUIDELINES AND PRECAUTIONS**

- Coracoid integration to glenoid should be solid
- Subscapularis split should be healed
- May increase loads across anterior shoulder progressively toward normal addressing remaining deficits more aggressively
- No collision sport or overhead throwing prior to 4 months
- All pectoral work should be done from the frontal plane and anterior – “always see elbows in peripheral vision”

### **GOALS**

- Normalize all AROM/PROM for elevation, and IR ; ER should be within 7-10 degrees of opposite side
- Symmetry of strength in rotator cuff, deltoid, and scapular stabilizers as measured by hand held dynamometer
- Return to chest level functional activity
- Gradual increase in load to the anterior shoulder

### **EXERCISES**

- Address ROM deficits with low load long duration stretching frequently
- May advance pectoral work to include push up, bench press, chest flies remaining even with or anterior the frontal plane; gradual increase in force/load starting with low load and high reps
- Continue biceps PRE
- Subscapularis progression: Push up plus at wall, counter decline, prone on knees; prone on toes
- D2 diagonal pattern with TheraBand

**CRITERIA FOR RETURN TO WORK/SPORT**

- Clearance from surgeon
- No pain or feeling of instability
- Sufficient ROM and strength for task completion (throwers need 115 deg of ER)