

# Dr. John Awowale, MD Posterior Labral Repair (Shoulder)

# Phase 1 - Maximum Protection Phase (0-6 weeks)

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# Protect integrity of repair

•Minimize pain and inflammation

Goals for Phase 1

- Prevent negative effects of elbow and wrist mobilization
- Activation of scapular stabilizers

#### **Precautions**

- pulleys are considered an AAROM exercise and should NOT be utilized in this phase
- •No upper extremity ergometer
- •No overhead swimming for 16 weeks
- •DO NOT reach behind back
- Wear sling at all times for first 6 weeks

#### **Brace**

•Wear sling at all times, including while sleeping, except when performing home exercises and physical therapy

# **Range of Motion**

- 0 − 2 weeks: Begin shoulder passive range of motion with pendulums 3x/day
- 2 − 4 weeks:
  - Flexion to 60 °
  - Extension to neutral (0°)
  - Abduction to 90°
  - External rotation to 45°
  - Internal Rotation to neutral with arm at side (0°)
- 4 6 weeks: Begin gradually progress PROM (limiting internal rotation to 45 degrees)
- Progress Active Assisted ROM (dowel, wall walks) progress from supine to standing

## Strengthening

- •Scapular strengthening (shurgs, protraction, retraction, depression)
- •Sub maximal shoulder isometrics in all directions (performed in sling)
- •Chin tucks
- •Wrist and hand active range of motion and isometrics

## **Aquatics**

• May be a candidate for aquatic therapy (to remain below shoulder height)

## **Modalities**

- •Vaso pneumatic compression for edema management 2-3x/week
- •Cryotherapy at home, 3 x per day for 20 minutes each



# Phase 2 – Active ROM and Initial Strengthening Phase (6-12 weeks)

## Goals for Phase 2

- Protection of surgical repair
- Minimize pain and inflammation
- •Initiate AAROM (internal rotation limited to 45°)
- •Restore scapular strength and proprioception

#### **Precautions**

- Avoid overhead work activities
- Lifting, pulling, or pushing limited to 10 pounds week 12
- •Avoid repetitive motions with shoulder
- •Do NOT exercise through shoulder shrug sign

# **Range of Motion**

- Progress shoulder Passive Range of Motion
  - Limit shoulder internal rotation range of motion to 45° for 12 weeks
- •Continue PROM exercises in all planes within limitations

# **Manual Therapy**

- •Manual joint mobilization (grade 1-2) for pain management or grade 3-4 for excessive capsular tightness
  - Avoid posterior mobilization
- •Continue manual scapular and thoracic mobilization as needed

# Strengthening

- •AAROM exercises with progression to AROM as tolerated
  - o Progress from gravity reduced positions to movement against gravity
  - Ex. Table slides, physio-ball on table, wand exercises, UE ranger
- •Sub-maximal rhythmic stabilization exercises at 100° of flexion
  - o Progress to multi-angle rhythmic stabilization exercises as tolerated
- •Initiate sub-maximal isometrics in all planes
- •Initiate isotonic strengthening progression for scapular and shoulder musculature
  - Ex. Serratus press outs, prone row, prone extension, prone horizontal extension, external rotation, D1/D2 patterns
- •Initiate sub-body weight closed kinetic chain exercise
  - o Ex. Quadriped exercises, wall lift offs, wall push ups

## **Aquatics**

•Continue aquatic-based therapy, namely for painful or guarded patients

## **Modalities**

- NMES if needed to promote scapula-humeral rhythm and strength
- Cryotherapy after activity

# Criteria for Progression to Phase 3

- •Minimal pain with Phase 2 exercises
- Adequate shoulder range of motion
- Demonstrate neuro-dynamic stabilization of the shoulder and appropriate scapulo-humeral rhythm



# Phase 3 - Strengthening Focused Phase (12-16 weeks)

# Manual Therapy

# Goals for Phase 3

- Progress ROM to 85% total arc of motion of contralateral arm
- Improve stability, strength, and endurance of shoulder and scapular stabilizers

#### **Precautions**

- No overhead swimming for 16 weeks
- •Lifting restriction of 15 lb until week 14
- Avoid throwing until appropriate criteria are met after week 16

- •Continue manual joint mobilizations (grade 1-2) for pain management or grade 3-4 for excessive capsular tightness as needed limit aggressive mobilization of posterior capsule
  - o Do NOT aggressively perform mobilization until week 12
- Continue manual scapular and thoracic mobilization as needed

## Strengthening

- •AROM exercises within full range against gravity
- •Multi-angle rhythmic stabilization exercises
- Continue isotonic strengthening for scapular and rotator cuff musculature with emphasis on posterior cuff strengthening
  - o Progress from gravity reduced positions to full gravity
  - Progress elevation from below to above shoulder height
  - Progress shoulder IR and ER from 30° to 60° to 90° abduction and from a supported to unsupported condition
- •Thrower's Ten Program
- Progress sub-body weight closed kinetic chain exercise
  - Progress to full body weight exercises
  - Progress from stable surfaces to unstable surfaces (foam, physioball, BOSU, etc.)
- •Initiate gradual progression of neuromuscular control exercises (ball on wall, body blade, ball flips, plyoback, etc.)

## **Aquatics**

•Continue aquatic-based therapy as needed

## **Neuromuscular Control**

•Initiate gradual progression of neuromuscular control exercises (ball on wall, body blade, ball flips, plyoback, etc.)

# **Modalities**

Cryotherapy after activity

## Criteria for Progression to Phase 4

- •Minimal pain with Phase 3 exercises
- •AROM 85% total arc of motion of contralateral arm
- •MMT ≥4/5 with shoulder and scapular testing
- •Demonstrate neuro-dynamic stabilization of the shoulder and appropriate scapulahumeral rhythm



# Phase 4 – Advanced Strengthening and Plyometric Phase (16-24 weeks)

#### Goals for Phase 4

- Restore shoulder, scapular, and total arm strength, power, and endurance
- Initiate upper extremity plyometrics
- Sport or work specific tasks

## Strengthening

- •Continue isotonic strengthening with transition to primarily overhead strengthening
- Gradual progression of sub-body weight suspension training exercises (TRX, GTS, assisted chin or dip machine, etc.)
- •Initiate traditional weightlifting exercises with emphasis on musculature balance of rotator cuff, back, and chest
- •Initiate sport specific interval training programs (throwing, hitting, or lifting) no earlier than 5 months
- •Transition to work specialty program if physical laborer

#### **Neuromuscular Control**

- •Continue neuromuscular control exercises (ball on wall, body blade, ball flips, bounce-back plyo tosses, hops and lifts, etc.)
- •Begin working on activity specific mechanics (throwing positions, hitting positions)
- •Light tennis ball toss at short distances -> progress toward interval throwing program after 5 months as criteria are met (see below).

## **Modalities**

Cryotherapy after activity

# \*For throwing athletes: perform functional testing. If test is passed begin interval throwing program (no earlier than 5 months). Re-test monthly until passed.

- Total Rotational Range of motion within 5° of non-throwing shoulder
- Full non-painful Range of Motion
- Prone ball drop test > 100% of non-throwing side
- ER/IR ratio: ≥70% on throwing arm with Isokinetic testing
- Throwing shoulder ER >95% of non-throwing shoulder

**Return to Function Testing:** Aurora BayCare return to function for the upper extremity protocol to be used

- Week 24: <u>Return to function testing</u> per MD approval (appt must be scheduled with Aurora BayCare Sports Medicine department – East Side location to complete testing)
- •Criteria: pain-free, full, pain-free shoulder range of motion, DASH ≤10% disability, and satisfactory isokinetic strength and functional testing.
- •No less than 5 months post-op for return to contact sports

