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Accelerated Rehabilitation Protocol After Anterior Capsular Shift

I. Phase I: Protection Phase (Weeks 0—6)

Goals

- Allow healing of sutured capsule
- Begin early protected range of motion
- Retard muscular atrophy
- Decrease pain and inflammation

A. Weeks 0—2

1. Precautions
 - (a) Sleep in immobilizer for 4 weeks
 - (b) No overhead activities for 4—6 weeks
 - (c) Wean from immobilizer and into sling as soon as possible
2. Exercises
 - (a) Gripping exercises with putty
 - (b) Elbow flexion-extension and pronation-supination
 - (c) Pendulum exercises (nonweighted)
 - (d) Rope-and-pulley active-assisted exercises
 - Shoulder flexion to 90°
 - Shoulder abduction to 60°
 - (e) L-bar exercises
 - External rotation to 15-20° with arm abducted to 40°
 - Shoulder flexion-extension to tolerance
 - (f) Active range of motion for cervical spine
 - (g) Isometrics for shoulder flexors, extensors, external and internal rotators and abductors

Criteria for hospital discharge

- Shoulder range of motion (active-assisted range of motion): Flexion 90°, abduction 45°, external rotation 40°
- Minimal pain and swelling
- “Good” proximal and distal muscle power

B. Weeks 2—4

Goals

- Gradually increase range of motion
- Normalize arthrokinematics
- Improve strength
- Decrease pain and inflammation

1. Range-of-motion exercises
 - (a) L-bar active-assisted exercises
 - External rotation in 40° abduction, progress to 45° abduction
 - Internal rotation in 40° abduction, progress to 45° abduction
 - Shoulder flexion-extension to tolerance
 - Shoulder abduction to tolerance
 - Shoulder horizontal abduction/adduction
 - (b) Rope-and-pulley exercises in flexion-extension

Note: All exercises are performed to tolerance. Athlete takes the movement to the point of pain or resistance and holds. *Gentle* self-capsular stretches are also performed.
2. Gentle joint mobilization to re-establish normal arthrokinematics to scapulothoracic, glenohumeral, and sternoclavicular joints
3. Strengthening exercises
 - (a) Isometrics
 - (b) May initiate tubing for external-internal rotation at 0° abduction

4. Conditioning program for trunk, lower extremities, and cardiovascular system
5. Decrease pain and inflammation: Use ice, nonsteroidal anti-inflammatory drugs, modalities

C. Week 5

1. Active-assisted range of motion flexion to tolerance
2. Internal-external rotation at 45° abduction to tolerance
3. Initiate isotonic (light weights) strengthening
4. Gentle joint mobilization (grade III)

D. Week 6

1. Active-assisted range of motion: Continue all stretching exercises
2. Progress external-internal rotation to 90° abduction

II. Phase II: Intermediate Phase (Weeks 7—12)

Goals

- Achieve full nonpainful range of motion at weeks 8—10
- Normalize arthrokinematics
- Increase strength
- Improve neuromuscular control

A. Weeks 7—10

1. Range-of-motion exercises
 - (a) L-bar active-assisted exercises
 - (b) Continue all exercises listed above
 - (c) Gradually increase range of motion to full range of motion by weeks 8—10
 - (d) Continue self-capsular stretches
 - (e) Continue joint mobilization
2. Strengthening exercises
 - (a) Initiate isotonic dumbbell program for
 - Side-lying external rotation
 - Side-lying internal rotation
 - Shoulder abduction
 - Supraspinatus
 - Latissimus dorsi
 - Rhomboids
 - Biceps curl
 - Triceps curl
 - Shoulder shrug
 - Push-up in chair (serratus anterior)
 - (b) Continue tubing at 0° for external-internal rotation
3. Initiate neuromuscular control exercise for scapulothoracic joint

B. Weeks 10—12

1. Continue all exercises listed above
2. Initiate tubing exercises for rhomboids, latissimus dorsi, biceps, and triceps
3. Initiate aggressive stretching and joint mobilization, if needed

III. Phase III: Dynamic Strengthening Phase (Advanced Strengthening Phase) (Weeks 12—20)

Criteria to progress to phase III

- Full, nonpainful range of motion

- No pain or tenderness
- Strength 70% or better compared to contralateral side

Goals

- Improve strength, power, and endurance
- Improve neuromuscular control
- Prepare athlete to begin to throw

Emphasis of phase III

- High-speed, high-energy strengthening exercises
- Eccentric exercises
- Diagonal patterns

A. Weeks 12-17

1. Exercises
 - (a) Begin Throwers' Ten Exercise Program (Appendix C)
 - Initiate tubing exercises in 90/90 position for internal and external rotation (perform slow- and fast-speed sets)
 - Tubing for rhomboids
 - Tubing for latissimus dorsi
 - Tubing for biceps
 - Tubing for diagonal patterns D2 extension
 - Tubing for diagonal patterns D2 flexion
 - Continue dumbbell exercises for supraspinatus and deltoid
 - Continue serratus anterior strengthening exercises, floor push-ups
2. Continue trunk and lower extremity strengthening exercises
3. Continue neuromuscular exercises
4. Continue self-capsular stretches

B. Weeks 17—20

1. Continue all exercises listed above
2. Initiate plyometrics for shoulder
 - External rotation at 90° abduction
 - Internal rotation at 90° abduction
 - D2 extension plyometrics
 - Biceps plyometrics
 - Serratus anterior plyometrics

IV. Phase IV: Throwing Phase (Weeks 20—26)

Criteria to progress to phase IV

- Full range of motion
- No pain or tenderness
- Isokinetic test that fulfills criteria to throw
- Satisfactory clinical examination

Goal

- Progressively increase activities to prepare athlete for full functional return

1. Exercise
 - (a) Initiate Interval Throwing Program (Appendix D) at week 20
 - Interval Throwing Program phase II at week 24
 - (b) Continue Throwers' Ten Exercise Program
 - (c) Continue plyometric exercises

Return to sports at 26-30 weeks