Children's Hospital of Philadelphia℠
Sports Medicine & Performance Center

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Arthroscopic Bankart Repair Protocol

*****Please refer to written prescription for any special instructions for each case*****

This protocol guides a progressive return to full activity between 4-6 months for non-throwers (may take longer for throwers) if all of the criteria are achieved. If the criteria are met sooner, the patient must restrict his/her activity level until the appropriate timeframe based on this protocol. If the patient has a concomitant surgical procedure, treatment will likely vary. Please consult with surgeon.

Weeks 0 to 6: (Initial PT evaluation to be scheduled within 2 weeks from surgery date)

Precautions:

- Wear sling at all times (including sleep), except for bathing and while performing physical therapy exercises
- No range of motion or stretching beyond staged goals
- No active forward elevation or external rotation
- No passive ER at 90° abduction
- No weight bearing/closed chain exercises through involved UE

Goals:

- **Discontinue sling use no sooner than 6 weeks post-op**
- Protect surgical repair and allow capsule-ligamentous-labral healing
- Minimize effects of immobilization
- Decrease pain and inflammation
  - Facilitate distal UE circulation and prevent distal swelling
- Gradually regain shoulder motion with staged passive range of motion goals
- Patient/Family education

Interventions:

- Supported pendulums (no weight)
- Shoulder forward elevation and abduction PROM/AAROM
  - Weeks 0-3: $\leq$ 90°
  - Weeks 3-6: $\leq$ 135°
- Shoulder ER PROM/AAROM with arm supported in scapular plane
  - Weeks 0-3: ER at 20° of abduction $\leq$ 30°
  - Weeks 3-6: ER at 20° of abduction $\leq$ 45°
- Scapular stabilization
- Shoulder submax isometrics (all directions)
- Elbow and wrist ROM
- Gripping exercises
- Ice as needed

Weeks 6 to 12:

Precautions:

- No range of motion or stretching beyond staged goals
  - Gentle stretching to gain end range ER at neutral or ER at 90° of abduction if significant limitation exists
  - If patient is hypermobile, avoid aggressive stretching
- Avoid strengthening exercises that place shoulder in end-range shoulder horizontal abduction beyond frontal plane (ie. push-ups, bench press)

Goals:

- Full shoulder ROM by week 12
- Normalize arthrokinematics of glenohumeral and scapulothoracic joints
- Improve shoulder girdle strength and proprioception
- Decrease pain and inflammation
- Initiate weight-bearing/closed kinetic chain activities at week 10

Interventions:

- Shoulder forward elevation and abduction ROM
  - Weeks 6-9: gradual progression of motion to PROM 135-155°, AROM 115-145°
  - Weeks 9-12: gradual progression of motion to full PROM, AROM 145°-WNL
- Shoulder ER ROM
  - Weeks 6-9: ER at 20° of abduction 35°-65°, ER at 90° of abduction 45°-75°
  - Weeks 9-12: ER at 20° of abduction 65°-WNL, ER at 90° of abduction 75°-WNL
- PRE Shoulder strength (IR/ER/Extension/Abduction/Forward Elevation)
  - Begin with non-provocative positions progressing to provocative positions by weeks 12
- Scapular stabilization
- Non-provocative Proprioceptive Neuromuscular Facilitation
  - Scapular and UE patterns
  - Rhythmic Stabilization (body blade, manual perturbation, etc)
- Weight-bearing exercises: wall/table push-ups, shoulder taps on table, etc.
- Incorporate lower extremity strengthening/core stability into program

CRITERIA TO ADVANCE (12-14 week testing)

- **Full pain-free shoulder AROM with normal arthrokinematics**
- **Objective UE shoulder strength ≥ 75% limb symmetry using hand-held dynamometer or isokinetic testing**
- **Push-up test: 5 push-ups with good symmetry and pain free**
- **Upper Quarter Y balance Test (medial reach only): ≥ 90% of limb length (measure C7 to middle fingertip)**

Weeks 12 to 16:

Goals:

- Full AROM and PROM without pain and with good mechanics
  - Gradually restore ER at 90° of abduction to achieve sport demands
- Begin jogging (start with straight ahead jogging to minimize fall risk)
- Progress closed chain/full weight bearing exercises
- Initiate shoulder ER/IR strengthening in 90° abduction
- Initiate UE plyometrics if objective shoulder strength has achieved 75% limb symmetry using hand held dynamometry or isokinetic testing
- Improve UE muscular strength and endurance

Interventions:

- Rotator cuff strengthening: progress to strengthening at 90° abduction
- Progress scapula stabilization exercises
- Resisted diagonal patterns (PNF)
- Thrower's Ten
- Begin UE plyometrics: double arm initially (chest pass, side throws, and overhead throws, plyo wall/counter push-ups), progress to single arm (wall ball dribbles, weighted ball drills, pre-throwing drills, etc.)

Weeks 16 to 24:

Goals:

- Enhance muscle performance and functional motion specific to sport demands
- Incorporate all components of kinetic chain and systems into rehab (e.g. lower extremity, trunk, cardiovascular conditioning and flexibility)
- Maximize neuromuscular control
- May gradually advance intensity using gym machines and free weights
    - Avoid motion extremes (arms moving posterior to frontal plane of body)
- Initiate sport specific training
    - Possible full return to sport for non-throwers (if return to sport criteria are achieved)
    - Initiate interval throwing program if below criteria are met (no sooner than 5 months)

Interventions:

- Address ongoing UE strength deficits (based on objective measurements)
- Eccentric posterior rotator cuff exercises for throwers
- Power lifting if appropriate based on age of patient, skeletal maturity, and sport demands (increasing weights with less repetitions)
- Advance plyometric and closed chain exercises based on individual sport demands
- Continue to address core/lower extremity strengthening and flexibility deficits

CRITERIA FOR RETURN TO FULL SPORT ACTIVITIES – 4-6 month testing

- **Pain free**
- **Full shoulder AROM based on sport specific demands**
- **Normal and symmetrical scapulohumeral rhythm with adequate scapular control**
- **Objective strength testing > 90% limb symmetry (measured using hand-held dynamometry or isokinetic testing)**
- **Functional testing:**
    - **Upper Quarter Y-Balance Test (best of 3 trials)**
        - **Medial reach distance ≥ 95% of limb length**
        - **≤ 4 cm difference between limbs in all directions**
        - **≥ 90% limb symmetry**
        - **Composite score 70-80%**
    - **Single-Arm Seated Shot Put Test (average of 3 trials)**
        - **≥ 90% limb symmetry if non-dominant arm is involved**
        - **≥ 105% limb symmetry if dominant arm is involved**
    - **Closed Kinetic Chain Upper Extremity Stability Test (average of 3 trials, 15 sec each)**
        - **Testing parameters:**
            - **Push-up position**
            - **Tape width:**
                - **≤ 11 years old: 24 inches**
                - **≥ 12 years old: 36 inches**
        - **Passing criteria:**
            - **≥ 17 average touches with good neuromuscular control**

- **Additional Criteria for Throwers (no sooner than 5 months)**
    - **Shoulder ROM**
        - **Total arc of motion/rotation at 90° within 5° of non-throwing shoulder**
        - **≤ 20° loss of internal rotation ROM at 90° compared to non-throwing shoulder**
        - **≤ 5° loss of flexion ROM compared to non-throwing shoulder**
        - **≤ 15° loss of horizontal adduction ROM compared to non-throwing shoulder**
    - **Strength**
        - **ER/IR strength ratio between 66% to 76%**
    - **Once all criteria are met, thrower may begin a long toss throwing program**

Months 6+:

Goals:

- Gradual return to full unrestricted sport activities once above criteria are met
    - Pitchers must complete long toss throwing program before advancing to a pitching program
- Maintain ROM, stability, and neuromuscular control
- Achieve maximal strength, endurance and power based on sport demands

This protocol is designed to be administered by a licensed physical therapist and/or certified athletic trainer. Please do not hesitate to contact our office should you have any questions concerning the rehabilitation process. Protocol adapted from Gaunt et al, JOSPT, 2010.

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