Bankart Repair/Anterior Capsulorrhaphy Rehabilitation Guideline

This rehabilitation program is designed to return the individual to their activities as quickly and safely as possible. It is designed for rehabilitation following Arthroscopic Bankart repair/Anterior Capsulorrhaphy procedure. Modifications to this guideline may be necessary depending on physician-specific instruction, location of repair, concomitant injuries or procedures performed. This evidence-based Arthroscopic Bankart Repair/Anterior Capsulorrhaphy Rehabilitation guideline is criterion-based. Time frames and visits in each phase will vary depending on many factors including patient demographics, goals and individual progress. This guideline is designed to progress the individual through rehabilitation to full sport and activity participation. The therapist may modify the program appropriately depending on the individual's goals for activity following Arthroscopic Bankart repair/Anterior Capsulorrhaphy procedure.

This guideline is intended to provide the treating clinician with a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post-operative care based on exam or treatment findings, individual progress and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

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General Guidelines/Precautions:

- The capsule is stressed with external rotation; thus, external rotation must be limited during the early phases of rehabilitation. Do not allow or perform ROM/stretching beyond goals; especially external rotation, both in neutral or abducted.
- **Arthroscopic procedure:** early rotator cuff strengthening can begin and progress quickly.
- **Open repair procedure:** subscapularis may be detached and reattached for better exposure of the glenohumeral joint, thus protection for 4-6 weeks is recommended including avoiding internal rotation strengthening.
- Avoid joint mobilizations in patients with multi-directional instability.
- Active Assisted ROM and isometrics initiated at 4 weeks.
- Active ROM initiated at 4-6 weeks.
- Strengthening initiated at 8-10 weeks.
- Weight training with modifications around 3-4 months
- Upper Extremity Return to Sport Testing for athletes around 4-6 months

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PHASE	SUGGESTED INTERVENTIONS	GOALS/MILESTONES FOR PROGRESSION
Phase I *Patient Education Phase (pre-operatively)* *Expected # of visits this phase: 1-3*	***Discuss:*** Anatomy, existing pathology, post-op rehab schedule, bracing, and expected progressions post-operatively ***Instruct on Pre-op exercises:*** Strength and ROM progressions as tolerated. ***Immediate Post-Operative instructions:*** • Maintain use of sling at all times until physician instructs to d/c. • Sling should be worn for 4-6 weeks • Avoid getting incision sites wet for 48 hours.	***Goals of Phase:*** 1. Improve ROM and strength prior to surgery. 2. Appropriate expectation framework for post-operative rehabilitation. ***Criteria to Advance to Next Phase:*** 1. Progress to Phase II post-operatively

Phase II
Maximum Protection Phase
 	
Weeks 0-2
 	
Expected # of visits this phase: 1-4
	Specific Instructions:
	• Sutures removed at 10-14 days (per MD discretion).
	• Maintain use of sling at all times until physician instructs to d/c at approx. 4-6 weeks s/p
	• Sleep in immobilizer. Reclined position is most comfortable with pillow support to the posterior gleno-humeral joint.
	• No carrying or lifting of any objects
	• No excessive stretching
	• No supporting of body weight by hands
	• Keep incisions clean and dry
	• No active ER, extension or abduction to decrease stress to anterior GHJ
	
	Suggested Treatments:
	Modalities: Pain control modalities as indicated.
	• Continue icing 3x per day or more.
	• No heat until 1 week s/p
	
	Range of Motion:
	• Wrist & hand AROM
	• PROM: (ROM done by therapist)
	  * Elbow PROM to end ranges to maintain mobility
	  * Flexion 70-90 deg. by week 2
	  * Scaption to 90 deg. by week 2
	  * ER 0-10 degrees in scapular plane by week 2
	  * IR to chest wall/ 45 degrees
	
	Exercise Examples:
	• Hand gripping exercises (putty, squeeze balls)
	• Pendulums
	• Scapular isometrics (shoulder shrugs/ scapular retractions 2-3x per day)
		Goals of Phase:
		1. Provide environment of proper healing of repair
		2. Prevention of post-operative complications
		3. Minimize muscle atrophy
		4. Improve PROM
		5. Diminish pain and inflammation
		6. Independence with home exercise program
		
		Criteria to Advance to Next Phase:
		1. Patient has met upward limits of PROM for this phase
		2. Patient is 2 weeks s/p

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Phase III
Motion and Muscle Activation Phase
 	
Weeks 6-12
 	
Expected # of visits this phase: 12-18
	Suggested Treatments:
	Manual Therapy: May initiate GHJ mobilizations to improve ROM
	PROM: Continue to progress PROM as tolerated
	* Flexion 0-160 degrees by week 10
	* ER 50-55 degrees in scapular plane by week 6
	* ER may be progressed as tolerated to 90 degrees through week 10 (from scapular plane to 90 degrees abduction)
	* IR equal to opposite side (may have contralateral differences in athletes)
	AAROM: **Initiated week 6 with no resistance to the shoulder**
	* Flexion with attention to proper scapulo-thoracic control
	* ER may be progressed as tolerated (from scapular plane to 90 degrees abduction)
	* Strengthening: **May initiate light scapular and rotator cuff strength below shoulder height at 7-8 weeks**
	Exercise Examples:
	• Continue with gleno-humeral rhythmic stabilization drills
	• Continue all stretching exercises
	• Side lying ER
	• Light Theratube exercises for cuff start at week 8
	• Initiate throwers ten program with attention to proper scapular control
	• **Strength training progressive external loading after week 10**
	• Weight bearing proprioceptive exercises at 10 weeks
	  • Week 10: quadruped weight bearing proprioceptive exercises
	  • Week 12: Wall push up
	Other Activities:
	• May initiate UBE at 7 weeks with light resistance
		Goals of Phase:
		1. Full PROM expected by week 10 (90-100 deg. of ER at 90 degrees of abduction)
		2. Preserve the integrity of the surgical repair
		3. Increase functional activity without soft tissue irritation
		4. Decrease pain and inflammation
		Criteria to Advance to Next Phase:
		1. Full and non-painful PROM
		2. No pain or tenderness
		3. Less than 20% strength deficit for all motions
		4. Clearance by MD to full activity and/or Throwers Program

Phase IV
Motion and Muscle Activation Phase
 	
Weeks 6-12
 	
Expected # of visits this phase: 12-18
	Suggested Treatments:
	Manual Therapy: May initiate GHJ mobilizations to improve ROM
	PROM: Continue to progress as tolerated
	* Flexion 0-160 degrees by week 10
	* ER 50-55 degrees in scapular plane by week 6
	* ER may be progressed as tolerated to 90 degrees through week 10 *(from scapular plane to 90 degrees abduction)*
	* IR equal to opposite side (may have contralateral differences in overhead athletes)
	AROM: Initiated week 6 with no resistance to the shoulder
	* Flexion with attention to proper scapulo-thoracic control
	* ER may be progressed as tolerated (from scapular plane to 90 degrees abduction)
	Strengthening: **May initiate light scapular and rotator cuff strength below shoulder height at 7-8 weeks**
	Exercise Examples:
	• Continue with gleno-humeral rhythmic stabilization drills
	• Continue all stretching exercises
	• Side lying ER
	• Light Theratube exercises for cuff start at week 8
	• Initiate throwers ten program with attention to proper scapular control
	• **Strength training progressive external loading after week 10**
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	Other Activities:
	• May initiate UBE at 7 weeks with light resistance
		Goals of Phase:
		1. Full PROM expected by week 10 (90-100 degrees of ER at 90 degrees of abduction)
		2. Preserve the integrity of the surgical repair
		3. Increase functional activity without soft tissue irritation
		4. Decrease pain and inflammation
		Criteria to Advance to Next Phase:
		1. Full and non-painful PROM
		2. No pain or tenderness
		3. Less than 20% strength deficit for all motions
		4. Clearance by MD to full activity and/or Throwers Program

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Phase V

Advanced Strengthening and Eccentric Control Phase

Weeks 13-24

Expected # of visits this phase: 12-18

Specific Instructions: Modifications of certain lifts to avoid stress to anterior capsule:

- Bench press to neutral, no barbell to begin
- No military pressing behind head
- No lat pull downs behind head
- Consider limiting or modifying back squat
- Consider limiting depth for tricep dips

Suggested Treatments:

- Continue all strengthening & mobility exercises from prior phase
- Encourage HEP progression and compliance
- Continue to progress throwing motion as able (especially ER)
- Resisted sport activity
- Progressive Plyometric activities
- Endurance training

Exercise Examples: *(Refer to Overhead Athlete Rehabilitation Guideline)*

- Weight bearing:
  - Week 13: Incline push up progressing towards neutral
  - Week 14: DB floor press
  - Week 15: Modified depth push up
  - Week 16: Full push up, DB bench modified depth
  - Week 20: Barbell bench (not wide grip) progressing to full depth at 6-9 months
- Pre-throwing drills
- Progression of total body strengthening program
- High speed band exercises
- Weight bearing: Push-ups, push up with a plus
- Plank progressions
- End range rhythmic stabilizations in various phases of throwing motions
- PNF patterns with bands, cable column, manual resistance
- Plyometrics: trampoline plyo chest pass, side & overhead toss, 90/90 toss, 90/90 ball drop, progressing to weight bearing plyometrics

Other Activities:

- Begin ***Interval Throwing Program*** or appropriate sport specific interval program

Goals of Phase:

1. Establish and maintain full shoulder AROM.
2. Improve muscular strength, power and endurance to 90% compared bilaterally for IR/ER.
3. Maintain shoulder mobility
4. Progress back to functional activities
5. Ensure proper throwing mechanics with pre-throwing drills to reduce risk for re-injury

Criteria to Advance to Next Phase for overhead athlete:
(Please refer to Overhead Athlete Rehabilitation Guideline)

1. Full and non-painful PROM for overhead athlete:
   a. Total PROM equal to opposite side for throwers
   b. Normalized Lattisimus Dorsi Length for throwers
   c. Normalized supine horizontal adduction with scapula stabilized
2. Full and non-painful AROM for overhead athlete:
   a. Prone 90/90 ER at 85% of supine PROM ER
   b. Equal back to wall flexion test
3. Muscular strength 90% of contralateral side

Phase VI

Advanced Movement and Return to Activity Phase

Month 6+

***Depending on staffing models, patients may transition to their Athletic Trainer during this phase*

Suggested Criteria for Return to Sport:

1. Successful progression of interval throwing program to 180ft with no pain.
2. Consider throwing mechanics assessment
3. ER/IR Ratio >80%
   - Hand held dynamometry at 90° abduction
   - In neutral rotation
4. Quick DASH or Kerlin Jobe score
5. Successful completion of Upper Extremity Return to Sport Testing protocol (see guideline for details).

Goals of Phase:

1. Progression of interval throwing program to prepare for return to competitive throwing with proper throwing mechanics
2. Development of individualized maintenance program in preparation for discontinuation of formal rehabilitation.

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