

Posterior Labral Repair

1. Defined
 - a. Reattachment of posterior labrum to the glenoid
2. Goals
 - a. Protect healing tissue
 - b. Control post-operative pain and swelling
 - c. Improve post-operative range of motion
 - d. Improve functional strength, stability, and neuromuscular control
3. Rehabilitation Principles
 - a. Be aware of compromised and/or repaired tissue
 - i. Size & location of tear
 - ii. Anchor stability
 - b. Healing tissue should never be overstressed but appropriate levels of stress are beneficial
 - i. Inflammatory phase days 1-3
 - ii. Tissue repair with proliferation phase days 3-20
 - iii. Scar tissue most responsive to remodeling 21-60 days but occurs from 1 to 8 weeks
 - iv. Final maturation taking as long as 360 days
 - c. Tissue reactivity of the shoulder and tissue healing will dictate the rehabilitation process. Reactivity is determined by the clinical exam
 - i. Level I Reactivity
 1. Resting pain, pain before end range.
 2. Aggressive stretching is contraindicated.
 3. Grade I-II mobilization for neurophysiological effect
 - ii. Level II Reactivity
 1. Pain onset occurs with end range resistance
 2. Grade III and IV mobilization appropriate per patient tolerance.
 - iii. Level III Reactivity
 1. Engagement of capsular end feels with little or no pain.
 2. Pain occurs after resistance.
 3. Grade III and IV mobilization and sustained stretching is appropriate
 - d. Eliminate inflammation as the cause of pain and neuromuscular inhibition
 - e. Ensure return of appropriate joint arthrokinematics
 - f. Apply techniques in loose packed unidirectional and progress to close packed and multidirectional based on tissue healing and patient response

- g. Facilitate performance of complex skills with proprioceptive and kinesthetic techniques: Low to high, sagittal to frontal, bilateral to unilateral, stable to unstable, slow to fast, fixed to unfixed surface
 - h. Encourage life-long activity modification to reduce risk factors associated with re-injury. Work within the “safe zone” for upper extremity activity.
 - i. Factors that affect the rehab process
 - i. Surgical approach
 - ii. Tissue quality
 - iii. Presence of concomitant pathology
 - iv. Age of patient
 - v. Co-morbidities
 - vi. Pre and intra-operative range of motion
 - vii. Pain and sensitivity levels
 - viii. Cognitive abilities
 - j. Re-establish voluntary and pain free control of the rotator cuff to prevent rotator cuff shutdown and decrease humeral head migration with AROM. Exercising through the shrug sign may damage the repair. Progress through the following:
 - i. Isometrics
 - ii. Active assisted elevation with eccentric lowering and isometric holds
 - iii. Isotonics <90 degrees (“downstairs” or gravity eliminated)
 - iv. Isotonics >90 degrees (“upstairs”)
 - v. Rhythmic stabilization
 - 1. Flexion (prone and supine)
 - 2. Internal/External rotation
 - k. Maintain scapular stabilization and mobility; proximal stability for distal mobility.
4. Post op functional guidelines
- a. Dependant on functional range, strength, and neuromuscular control
 - b. Drive- 4-6 weeks
 - i. May be physician dependant
 - ii. Check insurance restrictions
 - iii. Be aware of drug precautions
 - c. Work
 - i. Dependant on physician preference
 - ii. Functional demands of the job
 - iii. Sedentary 4-8 weeks
 - iv. Medium to high physical demand level 12 weeks
 - d. Sport
 - i. Golf 12 weeks
 - ii. Swimming 14 + weeks
 - iii. Lifting 12 – 14 weeks reinforcing safe zone principles such as caution with hyper abduction/extension with bench press lowered below the plane of the body until strength “and” control dictate otherwise

- iv. Throwing 16 + weeks begin interval throwing program
- 5. Post op equipment guidelines
 - a. Sling with abduction pillow at all times when not bathing or performing exercises
 - i. Begin weaning out of sling at 4-6 weeks per MD orders.

6. Rehabilitation for posterior labral repair

a. Week 1-3: Protective PROM Phase

- i. Precautions/Limits:
 - 1. Protect healing tissue
 - 2. No AROM
 - 3. Limit passive flexion/scaption to 120°
 - 4. Limit passive external rotation as tissue reactivity dictates.
 - 5. No passive internal rotation past body
 - 6. No posterior shoulder capsule stretching or horizontal adduction
- ii. Rx/Clinical Expectations
 - 1. PROM, such as pulleys, pendulum, or manual range, within the scapular plane and progress based on tissue reactivity and repair protection
 - a. 120° flexion/scaption
 - b. 30° ER at neutral abduction
 - 2. Decrease tissue reactivity with grade I – II mobilizations and modalities
 - 3. Isometric scapular setting and active scapular ROM such as scapular clocks, shoulder shrugs, or shoulder squeezes
 - 4. Sub-maximum pain free isometric contraction of the rotator cuff.
 - 5. Elbow, hand, and finger AROM for muscle pumping.

b. Week 4-6: AAROM/AROM Phase

- i. Precautions/ Limits:
 - 1. Initiate AROM at 4- 6 weeks
 - 2. Precaution with functional IR stretch such as reaching behind the back.
 - 3. No posterior glenohumeral joint mobilizations
- ii. RX/ Clinical Expectations
 - 1. PROM progressing based on repair protection and tissue reactivity
 - a. Flexion/scaption 0-150 degrees
 - b. Full ER by week 6
 - 2. AAROM, such as pulleys, wand, wall walks, or manual assisted range progressed from PROM, within scapular plane and ensuring appropriate joint mechanics and scapular stability.
 - 3. Grade III-IV mobilization based on level 2 tissue reactivity

4. Continue isometric rotator cuff activities with gradual increase in force production.
5. Initiate supine rhythmic stabilization at 90 degrees of flexion with protracted scapula for increased serratus ant activation.
6. AROM progressed from AAROM ensuring appropriate joint mechanics and scapular stability.
7. Initiate IR/ER with tubing within restrictions of AROM
8. Progress AROM to PREs for total arm strength of elbow, wrist and fingers

c. Week 6-12: Strengthening Phase

- i. Precautions/limits
 1. Progress symptomatically
- ii. RX/ Clinical expectations
 1. PROM
 - a. Full PROM by 7-9 weeks
 - b. Progressively increase flexion/Scaption/abduction
 2. Grade III-IV joint mobs if indicated to improve joint ROM
 3. Initiate rotator cuff isotonics at 6 weeks
 4. Progress resistance and reps with isotonics throughout phase
 5. Concentrate on eccentric limb control
 6. Advance proprioception per rehabilitation principles
 7. Initiate partial weight bearing exercises such as wall push up at week 6
 8. Initiate PNF exercise at week 6-10
 9. Initiate low amplitude plyos at week 8
 10. Initiate over head plyo toss at weeks 10-12

d. Week 12-24: Functional Training

- i. Precautions/Limits
 1. Progress symptomatically
- ii. RX/ Clinical expectations
 1. ROM full without restrictions
 2. Initiate sports specific training
 3. Progress isotonics/isokinetics/rhythmic stabilization
 4. Continue PNF and plyos in open and closed kinetic chain.
 5. Return non-overhead athletes back to sports as tolerated
 6. Interval throwing program at 16 – 20 weeks per MD orders

7. References

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