Hazel Dell Orthopedics and Sports Medicine

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Latarjet Procedure

1. Defined
    a. Removal of the coracoid along with the short head of the biceps and fixated along the anterior portion of the glenoid. The pec minor is released.
    b. The fixation on the glenoid is achieved by transecting the subscapularis muscle.
    c. The coracoid is attached with 2 screws, then the subscapularis and capsule are stitched back together.
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. Transected subscapularis muscle and capsule
        ii. Fixation of coracoid to the glenoid with screws
    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 1-8 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 associate with re-injury. Work within the "safe zone" for upper extremity activity.
i. Encourage integration of core strengthening with therapeutic exercises
j. Factors that affect 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
k. Re-establish voluntary and pain free control of the rotator cuff to prevent 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 isomertic 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
l. Maintain scapular stabilization and mobility; proximal stability for distal mobility

4. Post op functional guidelines
    a. Dependent on functional range, strength and neuromuscular control
    b. Drive
        i. Refer patient to physician
        ii. Refer patient to drug precautions
        iii. Refer patient to auto insurance coverage
        iv. No research to support recommendations for return to driving
    c. Work
        i. Sedentary up to 14 days
        ii. Medium to high physical demand level will be job specific

1. Dependant on functional demands of job
2. Physician input is required to make final decision

d. Sport
   i. Swim- No earlier than 12 weeks
   ii. Golf no earlier than 16 weeks
      1. Encourage backward golf
         a. Utilize driving range for all practice
         b. Begin with putting
         c. Progress with short irons and partial swings then to long irons and full swings
         d. Progress to driver and woods
   iii. Weight lifting no earlier than 16 weeks
      1. Reinforce safe zone principles
      2. Emphasize scapular stabilizers
      3. Begin with individual muscle, single joint movement, and light weights progressing to large muscle groups, multi-joint movements and heavy weights

   iv. Throwing no earlier than 16 weeks
      1. Emphasize proper biomechanics and proprioception with a functional progression through the phases of throwing
   v. Contact sports no earlier than 24 weeks

5. Rehabilitation of Latarjet Procedure
   a. **Week 0-4 Protective PROM Phase I**
      i. Precautions/Limits
         1. Sling at all time except for bathing, gentle circumduction and ROM of elbow, wrist and hand for first 2 weeks.
         2. No AROM
         3. Limit passive flexion 90 degrees
         4. Limit passive external rotation 20 degrees @ 0 degrees abduction
         5. Limit passive internal rotation to 45 degrees
      ii. Clinical expectations by end of week 4
         1. Flexion to 90 degrees
         2. External rotation to 20 degrees
         3. Achieve PROM to post-op restrictions by end of week 4
      iii. Treatment
         1. PROM for shoulder elevation
         2. Grade I-II mobilizations and modalities
         3. Isometric scapular setting and scapular clocks, shrugs and scapular squeezes
         4. At 2 weeks initiate gentle internal/external rotation passively
         5. Initiate elbow, hand and finger AROM
   b. Week 4-6 Phase II
      i. Precautions/Limits
         1. Discontinue Sling
         2. Passive flexion above 90 degrees as tolerated

3. Passive ER 45 degrees at 30 degrees of abduction
4. Active IR/ER as tolerated with No Resistance
5. Active flexion below 90 degrees as tolerated- No Resistance

ii. Clinical expectations by end of week 6
1. Wean from sling
2. Passive flexion to tolerance
3. Passive external rotation 45 degrees at 30 degrees of abduction
4. Active flexion to 90 degrees with no shrug sign

iii. Treatment
1. Progress to Grade III-IV mobilization if not meeting PROM expectations
2. PROM for shoulder elevation with pulleys, table slides
3. Incorporate posterior shoulder stretching as indicated with cross Body adduction stretch or sleeper stretch
4. Initiate gravity eliminated AROM within post-op restrictions for Flexion, IR, ER. Progress to gravity resisted positions
5. Continue modalities

c. Week 6-10 Phase III

i. Precautions/Limits
1. Passive ROM all planes as tolerated
2. Avoid positions/activities that excessively stress the anterior capsule
3. Progress AROM all planes as tolerated with resistance

ii. Clinical expectations by end of week 10
1. Flexion and abduction in the plane of scapula to tolerance
2. External Rotation tolerance progressing to 90 degrees abduction

iii. Treatment
1. Progress to AA/AROM activities of the shoulder with good shoulder mechanics
2. Initiate rhythmic stabilization activities
3. Progress AROM/Strengthening activities. Exercises should be progressed in terms of muscle demand, intensity and stress on the anterior joint capsule.
4. Initiate IR/ER strengthening using resistance with tubing or side lying against gravity
5. Initiate prone rowing at multiple angles

d. Week 10-16 Phase IV Strengthening Phase

i. Precautions/Limits
1. Progress symptomatically
2. Avoid excessive anterior capsule stress

ii. Clinical expectations by end of week 16
1. Flexion to WNL
2. External Rotation at all angles of abduction to WNL
3. Appropriate rotator cuff and scapular muscular strength for chest level activities

iii. Treatment

1. Continue P/AROM as indicated
2. Initiate bicep curls with light resistance, progress as tolerated
3. Progress subscapularis strengthening with push-up plus (wall, table, knees on floor, floor)
4. Initiate PNF activities gradually progressing resistance
5. Initiate gradually progressive strengthening for pec major and minor (avoid excessive stress on anterior capsule)

e. Week 16+ Functional Training/Overhead Sports

i. Precautions/Limits
1. Progress symptomatically
2. Overhead sports permitted, No contact sports until Week 24

ii. Treatment
1. Initiate sports specific training
2. Progress rotator cuff and scapular strengthening and proprioception encouraging safe zone principles
3. Progress core strengthening utilizing the Wellington Functional Foundation Model
4. Progressive return to upper extremity weight lifting program emphasizing the larger, primary muscles (low weight, high reps)
5. Lower extremity strengthening and stretching
6. May begin contact sports as Week 24

References

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