Rotator Cuff Repair Rehabilitation Guidelines

(Arthroscopic/mini-open/open procedures)

Protocol

ROTATOR CUFF REPAIR (Arthroscopic/mini-open/open procedures)

INTRODUCTION

The guidelines that follow are a frame work of basic exercises and management strategies based on the patient whohas had a **LARGE** cuff tear (>5-6cm) repaired. The size of the rotator cuff tear and the strength of the repair of the tendon back to the bone vary from patient to patient. Patients who have had a small tear repaired **may** be progressed faster as tolerated.

CLASSIFICATION OF ROTATOR CUFF TEARS:

SMALL = Less than 1cm; MEDIUM = 1-3cms; LARGE = 3-5cms;
MASSIVE = greater than 5cms

The physiotherapy programme will need to be **individualised** for each patient, all exercises should be performed without pain and the details of specific restrictions will be in the post-operative instructions. If you have not receivedthese please ring the consultant's secretary.
Emphasise to the patient the importance of protecting the repair to allow soft-tissue healing in the first two phases. Alongside this we aim to regain passive range of movement (PROM) and good scapula-humeral rhythm (SHR) beforemoving onto strengthening in stage 3. The milestones may be used to assess whether you feel the patient is making good progress or not.

Shoulder rehabilitation is more than strength-training of the shoulder muscles alone. The (neuromuscular) rehabilitation addresses the whole shoulder girdle, upper extremity, core stability and training of the kinetic chain.

NOTES

Subscapularis Repair: if the subscapularis muscle is repaired, the range of movement into lateral rotation needs tobe limited to neutral and no resisted internal rotation should be taught during the first 6-8 weeks to protect the repair (check the post op note).

Abduction pillow/brace: larger tears have a greater risk of re-tear due to their size, often poor tissue quality and therepair being under greater tension. In these patients, the emphasis is significantly more on protecting the repair in the early stages rather than regaining range of movement; therefore they **may** be managed in an abduction brace initially.

Open Rotator Cuff Repairs: the open procedure requires release of the deltoid muscle from the acromion. The anterior-mid fibres of deltoid therefore need to be protected from full active use **until 6-8 weeks** post operatively.

InSpace™ implantation (Ballon): please see accompanying OrthoSpace InSpace™ Implantation protocol and https://www.youtube.com/watch?v=cejMRmNnmJc for more information

POST SURGERY

Phase 1 (1 – 14 days)

Goals:

- Maintain integrity of the repair
  - Sling at all times except while dressing/washing or doing exercises
  - Teach sling, dressing and personal hygiene techniques
- Management of pain, inflammation and muscle inhibition
  - Analgesics, NSAID's, ice, sling, passive movement and posture
- Teach shoulder girdle control/setting and relaxation
  - Retraction and depression
- Gradually increase PROM **as tolerated/not into pain/do not force or stretch**
  - Pendulum with good SHR
  - ER/IR (between 0°-45°of scaption with elbow supported)
- Hand, wrist, elbow and neck range of movement (ROM) exercises as required
- Advice on sleeping position
  - Wearing sling, if supine use a pillow beneath the elbow to prevent the shoulder resting in extension
- Align developing collagen fibres and prevent muscle atrophy
  - Sub-maximal, pain-free isometrics in neutral (<30% maximal voluntary contraction) as tolerated

Precautions:

- Sling usually for 6 weeks (dependent on size of the tear – see post-op instructions)
- No active movement of elbow away from body
- No lifting of objects
- No excessive shoulder extension
- No excessive stretching or sudden movements
- No supporting of body weight on operated upper limb
- Keep wounds clean and dry

Milestones:

- Pain, inflammation and muscle inhibition well managed
- Return to pre-operative sleep patterns
- Good scapula setting
- PROM: ER to neutral and Flexion 45°with good SHR

Phase 2 (15 days – 6 weeks)

Goals:

- Allow healing of soft tissue – do not over-load healing tissue
- Continue to manage and reduce pain, inflammation and muscle inhibition
  - As phase 1
  - Alternate treatment strategies as appropriate e.g. manual therapy techniques, taping
- Once stitches have been removed begin scar massage
- Gradually restore full, pre-op PROM **as tolerated/not into pain/do not force or stretch**
  - Refer to post-op note for specific restrictions
- Introduce active-assisted range of movement (AAROM) from three weeks **as tolerated/not into pain**
  - Refer to post-op note for specific restrictions
- Active range of movement (AROM):
  - In large tears, it will take up to six weeks before it is safe to introduce AROM, progressing from AAROM **astolerated/not into pain**
  - In small tears, AROM may be possible from 4 weeks progressing from AAROM **as tolerated/not into pain**
  - Refer to post-op note for specific restrictions
- Re-establish dynamic shoulder stability
  - Ensure good SHR through PROM and use it to guide progression of AAROM and AROM

Precautions:

- No lifting
- No excessive shoulder extension
- No excessive stretching or sudden movements
- No supporting of body weight by hands
- Usually wean out of the sling after 6 weeks (dependent on size of the tear – see post-op instructions)

Milestones at 3 weeks:

- Pain, inflammation and muscle inhibition well managed
- Passive flexion aim to 50% of pre-operative range (dependant on size of tear)
- Passive external rotation to neutral
- Good SHR with PROM

Milestones at 6 weeks:

- Pain, inflammation and muscle inhibition well managed
- Passive flexion aim to 100% of pre-operative range (dependant on size of tear)
- Passive external rotation to 30°
- Good SHR with PROM

Phase 3 (7 - 14 weeks)

Goals:

- Full PROM
  - Introduce multi-directional stretching into end of range **as tolerated/not into pain**
- Gradually restore pre-operative AAROM and then AROM with good SHR **as tolerated/not into pain**
- Gradually introduce and progress shoulder strengthening **as tolerated/not into pain**
  - Introduce scapular stabilisation exercises
  - Introduce cuff strengthening, progressing to maximal isometrics then to isotonic strengthening
  - Introduce proprioceptive exercises
  - Gradually progress to shoulder and upper limb strengthening **as long as the patient is able to elevate the arm without the shoulder/scapular 'hitching'**
  - Gradually progress to dynamic and rhythmic stabilisation exercises
- Gradually progress lower limb and core strengthening as required
- Gradually return to light, non-repetitive functional activities
- Gradually introduce light, early-stage sport-specific exercises
- Return to driving (right 6-8 weeks, left 8-10 weeks) smaller tears maybe able to start earlier

Precautions:

- Avoid excessive loading of shoulder
  - No heavy lifting
  - No prolonged, repetitive upper limb activities

Milestones at 14 Weeks:

- Resolved pain, inflammation and muscle inhibition
- AROM with good SHR through elevation to 100% of pre-operative range
- Passive external rotation to 100% of pre-operative range

Phase 4 (3 – 6 Months)

Goals:

- Maintain full PROM
  - Continue multi-directional stretching into end of range **as tolerated/not into pain**
  - Capsular stretches (especially posterior capsule if tight)
- Full pre-operative AROM with good SHR **as tolerated/not into pain**
- Progress shoulder strengthening **as tolerated/not into pain**
  - Progress cuff strengthening and scapular stabilisation exercises
  - Progress proprioceptive exercises
  - Progress shoulder and upper limb strengthening ensuring good SHR
  - Progress dynamic and rhythmic stabilisation exercises
- Progress biceps strengthening
- Progress lower limb and core strengthening as required
- Gradually progress functional activities
- Gradually progress sport-specific exercises

Precautions:

- Avoid excessive loading of shoulder
  - No heavy lifting away from body
  - No prolonged, repetitive overhead activities

Milestones at 6 months:

- Full pain-free motion and rotator cuff strength restored

Phase 5 (6 – 9 Months)

Goals:

- As phase 4
- Gradual return to strenuous work activities as required
- Gradual return to contact sports as required

Sulis Specialist Orthopaedic Shoulder Team

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