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1.0 Policy Statement

1.1 It is the policy of Cappagh National Orthopaedic Hospital to provide a patient focused physiotherapy service delivered by chartered physiotherapists and support staff working in a well-equipped environment.

1.2 It is the policy of Cappagh National Orthopaedic Hospital to provide health professionals and the public with the necessary advice and guidance on physiotherapy rehabilitation.

2.0 Purpose

2.1 The purpose of this guideline is to advise health professionals and patients on the physiotherapy rehabilitation of a person undergoing a reverse geometry shoulder arthroplasty.

3.0 Scope

3.1 This guideline applies to all staff involved in the care of a person undergoing a reverse geometry shoulder arthroplasty, community staff involved in the pre and post-operative care of the patient, the patient and their family.

4.0 Health & Safety

4.1 There are health and safety risks involved in patient care, namely risk of physical injury to patient and staff, risk of infection.

4.2 Physiotherapists have the necessary qualifications and clinical experience to carry out this guideline and to supervise unqualified support staff.

4.3 They must be eligible for membership of their professional body, the Irish Society of Chartered Physiotherapists (ISCP).

4.4 They undertake mandatory manual handling, basic life support training, fire safety, infection prevention and control and risk management.

4.5 They complete a minimum of 100 hours continuing professional development every three years as required by the ISCP.

5.0 Responsibilities

5.1 It is the responsibility of physiotherapists to implement this guideline.
6.0 Definitions and Abbreviations
Reverse Geometry Shoulder Arthroplasty changes the orientation of the shoulder so that the normal socket (glenoid) now is replaced with an artificial ball, and the normal ball (humeral head) is replaced with an implant that has a socket into which the artificial ball rests. This type of design completely changes the mechanics of the shoulder and enables the artificial joint to function when the rotator cuff is either absent or when there is significant bone loss.

7.0 Guideline
7.1 Pre-Operative
7.1.1 Assessment as appropriate, to include shoulder, neck and scapular range of movement, muscle strength and general upper limb function.

7.2 Post-Operative
Rehabilitation is a three-phase process, based on tissue healing:
PHASE 1 (weeks 1-4) Passive/active assisted range of movement phase.
PHASE 2 (weeks 4-6) Active assisted/active range of movement phase.
PHASE 3 (weeks 8-12+) Active range of movement/strengthening phase.

7.2.1 Phase 1 (Weeks 1-4)
7.2.1.1 Day 1
- Review operation notes and post-operative physiotherapy instructions. Discuss with surgeon/team.
- Shoulder sling fitted in theatre – can be removed for hygiene and exercise.
- Teach axillary hygiene.
- Teach postural awareness (scapula and thoracic spine).
- Encourage wrist, elbow and hand movements.
- Advise re control of swelling (ice, elevation) and positioning for sleep.
- Arrange out patient follow up prior to discharge.
- Where rotator cuff repair is carried out, begin passive range of movement for 4-6 weeks depending on size of tear (refer to rotator cuff repair protocol).
- Where no rotator cuff repair is carried out:
  - Gentle pendular exercises

7.2.1.2 Commence passive shoulder forward flexion in supine with scapula well stabilised. Progress gently from passive to active assisted and use the uninvolved arm for guidance and support.
7.2.1.3 External/internal rotation range is determined by rotator cuff integrity, discuss with surgeon.

7.2.1.4 Aim for flexion <120°, external rotation <30°, abduction <45°

7.2.2 Phase 2 (Weeks 4-6)
7.2.2.1 Wean out of sling and encourage increased functional use of the operation arm with activities of daily living as surgery guidelines dictate.

7.2.2.2 Progress to active range of movement of the arm in elevation as control allows.

7.2.2.3 Progress external and internal rotation and initiate abduction.

NB: No forceful stretching, no strengthening or resistance exercises, no overpressure in adduction, flexion >120° or combined external rotation and abduction.

7.2.3 Phase 3 (Weeks 8-12+)
7.2.3.1 Commence hydrotherapy if available.

7.2.3.2 Progressive strengthening programme:
- Include deltoid, teres minor and subscapularis if intact
- Progress from sub maximal isometrics to limited/full range isotonics
- Resisted exercises (free weights or theraband) below shoulder level

7.3 Precautions
7.3.1 External rotation strength long-term is usually compromised as there is decreased leverage of posterior deltoid due to the medialisation of the humerus. Teres minor is often the only humeral external rotator present. Avoid overloading this with resistance.

7.3.2 To avoid prosthesis instability or dislocation from contact of the humeral component on the scapula, coracoid or acromion, avoid forceful shoulder movements in flexion >140°, external rotation >45°, internal rotation with hand behind back and horizontal adduction beyond neutral.
7.3.3 Scapular substitution is expected with active range of movement in elevation to maximize efficiency of deltoid.

7.3.4 No weight lifting above shoulder height with more than 2-4 kg unless otherwise instructed by the surgeon.

8.0 Related Documents
Individual Physio tools exercise sheets

9.0 Appendices
N/A

10.0 References
Physical therapy guidelines for rehabilitation following shoulder arthroplasty with reversed prosthesis. Physical Therapy Services, Massachusetts General Hospital, Boston, USA.