LOTHIAN PHYSIOTHERAPY BEST PRACTICE STATEMENT

Patella Realignment

Introduction/Aim

A Patella Realignment is considered in a patient with recurrent patellar instability or maltracking which has failed to resolve with conservative management. This procedure is an open surgery which can include either proximal or distal realignment or a combination of both. A lateral release of the patella may also be included. On occasion this procedure may also include reconstruction of the medial patella femoral ligament (MPFL). Isolated surgical procedures to reconstruct the MPFL may be indicated in instances of instability and are covered in a separate Best Practice Statement.

Patella Realignment surgeries are ordinarily day case procedures. Patients are usually discharged fully weight bearing as tolerated with elbow crutches in a Donjoy knee brace. Routinely, the knee brace will be set at 0° - 30° for the initial two weeks, 0° - 60° for the subsequent two weeks followed by 0° - 90° for a further two weeks.

These surgeries are typically carried out by Mr Keating, Mr White or Mr Lawson.

Scope of practice

This statement is aimed to guide MSK physiotherapists treating patients post Patella Realignment surgery.

The statement and recommendations should always be used in conjunction with the clinical reasoning skills of the physiotherapist, any specific post operative instructions and patients should always be treated on a case by case basis.

Evidence base

This best practice statement is based upon the 2011 Patella Realignment Guidelines and expert opinion. See reference list from Patella Realignment Guidelines dated 2011 (attached) and updated article list 2020.

Once again, there were limited published articles available which cover post operative rehabilitation of Patella Realignment surgery specifically. These guidelines therefore reflect current practice and expert opinion and have been developed in consultation with the relevant orthopaedic consultants at RIE.

Physiotherapy Recommendations

Timescales are approximate and rehabilitation progress, at each stage, is guided by minimal swelling, resolution of pain and good muscle recruitment.

Phase 1 (0 - 2 weeks)

Begins immediately following surgery

Goals	Recommendations
Reduce Inflammation	Ice approx 20 – 30 minutes at least three times daily. In case of effusion, compression when active and elevate (without compression) when resting.
Gentle progression of active flexion to 30º	Knee brace 0º-30º for two weeks. Active or active-assisted knee flexion/extension with brace on.
Regain functional quads power	Quads muscle re-education (may require bio-feedback).
Regain normal lower limb muscle lengths	Assessment and appropriate stretching for tight soft tissue structures.

Phase 2 (2 - 4 weeks)

Goals	Recommendations
Restore normal gait	Can mobilise without elbow crutches once sufficient quads control and gait appears normalised.
Increase active flexion to 60°	Don joy brace 0°-60°. Active/ active assisted knee flexion in brace.
Full extension	Active/ active assisted knee extension in brace.
Increase lower limb strength (particularly quads)	Closed kinetic chain quads exercises. Quad muscle re-education. Calf strengthening. Hamstring strengthening. Hip strengthening exercises as appropriate. Core strengthening.
Improve proprioception	Commence dynamic standing balance exercises e.g. wobble board.

Maintain and improve lower extremity flexibility	Continue stretching exercises as required.

Phase 3 (4 – 6 weeks)

Goals	Recommendations
Increase active flexion to 90°	Don-joy brace 0°-90°.
Improve lower limb power	Progression of lower limb strengthening. NB Avoid resisted open kinetic chain quads until 6 weeks post-op (bodyweight only).
Continue to improve proprioception	Progression of dynamic standing balance exercises.

Phase 4 (6 weeks and extends until 3 months)

Goals	Recommendations
Increase active flexion: aim for full ROM at three months post-op	Removal of Don Joy. Unlimited active/ active assisted flexion. Static bike once able and ROM allows. Mobilisations to restore any residual loss of ROM. Quads stretching.
Improve lower limb power	Open kinetic chain quads strengthening (progress range as appropriate to patient's symptoms: NB patello-femoral pain).
Continue to improve proprioception	Progression of dynamic standing balance exercises.

Phase 5 (3 months until return to appropriate activities)

Goals	Recommendations
Full ROM at three months post-op	Mobilisations and muscle stretching to restore any residual loss of ROM.
Functional lower limb power	

Return to appropriate activity level	Walk/ jog progression. Plyometrics. Sports specific drills.

Key Points

- Evidence available remains variable and inconsistent and there are no RCTs comparing one programme of rehabilitation versus another.
- These recommendations should be used alongside clinical reasoning.
- If the patient is not progressing as expected, this must be discussed with a senior physiotherapist or operating surgeon/consultant.
- Potential complications include patella femoral pain and wound infection.
- Return to sport should be guided by a stable, non-irritable knee with full ROM, sufficient neuromuscular control and strength of the affected limb should be >90% of the unaffected limb (assuming contralateral limb is unaffected).
- Return to sport should be guided by functional goals and not timescales.
- Driving can commence when a patient has sufficient mobility and neuromuscular control to do so, **and** has obtained advice from their insurance company. This will likely be 12 weeks.