

Division of Pediatric Orthopaedics

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OPEN LATERAL RELEASE / PATELLA REALIGNMENT POSTOPERATIVE REHABILITATION PROTOCOL

Phase I for Immediate Postoperative – Weeks 1-6

Goals: Control inflammation, protect fixation, activation of quadriceps and VMO, full knee extension, minimize adverse effects of immobilization

Intervention:

- ROM: 0-2 wks – 0-30 degrees of flexion, 2-4 wks – 0-60 degrees, 4-6 wks – 0-90 degrees
- Brace: 0-4 wks – locked in full extension 24 hours 7 days a week except for therapeutic exercises and quad sets use, 4-6 wks – unlocked for sleeping, locked for ambulation
- Weight-bearing: as tolerated with two crutches, with brace locked in extension.
- Quadriceps sets, straight leg raises (as tolerated) and isometric adduction
- Heel slides 0-60 degrees 2-4 weeks, 0-90 degrees at 4-6 weeks
- Non-weight bearing gastrocnemius/soleus, hamstring stretches
- 4-way SLR with brace locked in full extension
- Resisted ankle ROM
- Patellar mobilization at 4-6 weeks (when tolerated)

Phase II – Weeks 6-8

Criteria for progression: Good quadriceps set, ~90 degrees of flexion, no signs of active inflammation
Goals: Increase flexion, avoid overstressing fixation, control of quadriceps and VMO for proper patellar tracking

Intervention:

- Brace: discontinue use for sleeping, unlock for ambulation as per physician's orders
- Weight bearing: As tolerated with crutches
- Progress to weight-bearing gastrocnemius/soleus stretching, full flexion with heel slides
- Balance exercises
- Stationary bike – low-resistance, high seat
- Wall slides 0-45 degrees of flexion progress to mini squats
- Electrical stimulation for VMO (no electrical stimulation for 6 wks)

Phase III Week 8-4 months

Criteria for progression: No quadriceps extensor lag with SLR, nonantalgic gait, no evidence of lateral patellar tracking or instability

Intervention:

- Discontinue crutches when: no extensor lag with SLR, full extension, nonantalgic gait pattern
- Step-ups - 2 inches progress to 8 inches
- Stationary bike – moderate resistance • Endurance – treadmill, Stairmaster
- Gait training
- 4-way hip exercise
- Leg press 0-45 degrees of flexion
- Toe raises, hamstring curls
- Continue balance activities
- Hamstrings, gastrocnemius/soleus, add quadriceps and iliotibial band stretches

Phase IV 4-6 months

Criteria for progression: Good to normal quadriceps strength, no soft tissue complaints, no evidence of patellar instability, clearance from physician to progress closed-chain exercises and resume full or partial activity.

Intervention:

- Progression of closed-kinetic chain exercises
- Jogging/running in pool with resistance
- Functional progression, sport-specific training

(Reference: D'Amato and Bach, in *Clinical Orthopaedic Rehabilitation* by S. Brent Brotzman and Kevin E. Wilk)

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