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MPFL Reconstruction

Rehabilitation Guidelines

- o This guideline is inclusive of a lateral lengthening when done in conjunction with a MPFL reconstruction. An isolated lateral lengthening (without MPFL) follows a more aggressive protocol.
- o Concurrent osteotomy (TTO/AMZ) patients are strict NWB for 6 weeks with gradual progression to WB from weeks 6 to 8

Acute/Immediate Post-Operative Phase 0-1 week

Guidelines

- Brace:
 - o Locked in full extension (-10) for all activities except therapeutic exercises
 - o Locked in full extension for sleeping
- Gait: TTWB
- ROM:
 - o Knee: 0 – 30 degrees
 - o Ankle AROM
- Maintain hamstring strength of the ipsilateral leg and lower extremity strength of the contralateral leg

Moderate Protection Phase 2-4 weeks

Guidelines

- Brace:
 - o Weeks 0-4, locked in full extension for all activities except therapeutic exercises
 - o Until 6 weeks post-op, keep locked in full extension for sleeping
- Gait:
 - o Weeks 0–2: TTWB
 - o Weeks 2: Progress to WBAT in EXTENSION only
 - o *EXCEPTION: concurrent osteotomy (TTO/AMZ) patients are strict NWB for 6 weeks with progression to WB from weeks 6 to 8*
- ROM:
 - o Weeks 0–2: 0–30 degrees
 - o Weeks 2–6: 0–90 degrees
- Strengthening:
 - o Quad sets with biofeedback and e-stim for VMO
 - o By 6 weeks, goal of regaining active quad and VMO control
 - o Heel slides to recommended ROM, SLR in 4 planes with brace locked in full extension
 - o Resisted ankle ROM with theraband
 - o Patellar mobilization, as tolerated

Moderate Protection Phase 4-10 weeks

Guidelines

- 4–6weeks:
 - o Brace
 - Removed for sleeping (6 weeks)
 - Locked in full extension for ambulation

- o Gait: FWB/WBAT in full extension
 - *EXCEPTION: concurrent osteotomy (TTO/AMZ) patients are strict NWB for 6 weeks with progression to WB from weeks 6 to 8*
- o ROM
 - 0 – 120 degrees of flexion
- o Strengthening: Continue same as Phase II
- 6–8weeks:
 - o Brace
 - Possible Switch to Patellar Stabilization Brace
 - o Gait: Normalize gait (WBAT in flexion/extension)
 - o ROM: Increase flexion gradually to normal range for patient
 - o Strengthening
 - Continue NMES as needed
 - Progress to WB gastroc and soleus stretching
 - Closed chain balance exercises
 - AVOID deep knee squatting greater than 90 degrees
 - Stationary bike: low resistance and high seat
 - Wall slides progressing to mini-squats 0 – 45 degrees of flexion
- 8 – 10 weeks:
 - o Brace: Patellar Stabilization brace PRN
 - o Gait: D/C if no extension lag is present, patient is able to achieve full extension, and gait pattern is normalized with one crutch
 - o Strengthening:
 - SLR without extension lag
 - o Closed-chain strengthening including step-up (begin at 2-inch step)
 - Moderate resistance for stationary bike
 - 4-way resisted hip strengthening
 - Leg press 0 – 60 degrees of flexion
 - Swimming and/or stair master for endurance
 - Toe raises, hamstring curls, and proprioceptive exercises
 - Treadmill walking
 - Flexibility exercises

Minimal Protection Phase (Progressive ROM/Strengthening) 10+ weeks

Guidelines

Criteria:

- Clearance from physician to begin more concentrated closed-kinetic chain exercises and resume full or partial activity level
- At least 0 – 115 degrees AROM with no swelling and complete voluntary contraction of quad
- No evidence of patellar instability
- No soft tissue complaints
- Strengthening:
 - o Progression of closed-kinetic chain activities including partial squats (0 – 90 degrees), leg press, forward and lateral lunges, lateral step-ups, bicycle and/or stepper
 - o Functional progression, sport specific activities

Return to Activity Phase

Exercises: Slowly progress to treadmill walking, resisted biking, running (as strength, ROM and pain/swelling allow) progress proprioception activities as tolerated, begin hop/agility when good alignment and LE control is present*

*May use single leg hop for distance testing (Cincinnati hop tests) for side-to-side comparison
80% is goal to begin light agility and cutting

**Modalities as needed for pain control and quadriceps strengthening are permitted.