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MPFL Reconstruction

General Goals

1. Restore normal joint function
 - a. Control pain and inflammation
 - b. Restore range of motion
 - c. Restore muscle strength
 - d. Improve proprioception and agility
 - e. Restore endurance
2. Return to pre-injury unrestricted and sporting activity
 - a. 90% muscle strength and endurance as determined by isokinetic testing or functional hop test
 - b. Functional hop test
 - i. 3 consecutive SLH for distance (90% of contralateral normal)

Post-Op Phases

1. Phase I: 0-4 weeks
 - a. Brace:
 - i. Protected weight bearing. TTWB in with brace locked in extension
 - ii. SLR with no extension lag
 - iii. Good quad control
 - b. Exercises
 - i. Quad sets (SLR's) hourly +/- e-stim (4 directions)
 - ii. Ankle pumps, HS and gluteal sets
 - iii. Active extension from 90-50 degrees out of brace
 - iv. * Patella Mobs – superior/inferior and med/lat
 - v. AROM/PROM exercises – (0-90 degrees)
 - vi. Hip flexor exercises, hip abductor exercises
2. Phase II: 5-8 weeks
 - a. Criteria to progress to phase II
 - i. Minimal swelling
 - ii. Gait with full extension
 - iii. Ability to lock knee while weight bearing
 - b. Can discontinue brace beginning week 5
 - c. Advance to FWB/no crutches over this phase
 - d. Exercises
 - i. Increase AROM/ PROM beyond 90 degrees: no limits
 - ii. Stationary bike: no resistance

1. Advance duration as tolerated
- iii. Resisted gastroc/soleus exercises with theraband only
- iv. Progress to bilateral toe raises and then to unilateral toe raises
- v. Resisted hamstring curls with therabands
- vi. Step-ups (lateral and forward) on 2-4 inch steps
 1. Increase at own individuals pace
- vii. Forward and backward walking with theraband around thighs
- viii. Ankle weights to SLR if no extension lag.

3. Phase III: 9-12 weeks

- a. Criteria to progress to phase III
 - i. Full active extension and 110 degrees of flexion
 - ii. No extension lag
 - iii. Good quad control on single leg stance
 - iv. Stairs foot over foot
 - v. WBAT
- b. Program
 - i. Stationary cycle with light resistance
 1. RPM>80
 2. Progress to 15-20 minutes per day
 - ii. Leg Press or Total Gym 40-45 degrees knee flexion toward full extension
 - iii. Calf raises using leg machine to add resistance
 - iv. Proprioception exercises
 1. Balance Board/BABS
 2. Theraband "kicks" (wt bear on operative leg)
 3. Pool program if available
 4. Resistance Walking (forward/backward)
 5. Hip exercises (all muscle groups)
 - v. Stair stepper or seated Kinitron if no anterior knee pain
 1. Begin for 1-5 minutes
 2. Short steps (4-6") Can gradually increase time to 15 minutes

4. Phase IV: 12 weeks +

- a. Criteria to progress to phase IV
 - i. Full AROM
 - ii. Normal gait
 - iii. No swelling or pain
- b. Program
 - i. Increase intensity and resistance for exercises above
 - ii. Heel taps
 - iii. Start light agility drills
 1. Carioca
 2. Single-leg hopping on total gym
 - iv. Slow lunges with tubing
- c. Exercises at 16 weeks
 - i. Perform isokinetic testing (180deg/sec) or single leg hop 3 consecutive for distance
 - ii. Begin light jogging on treadmill
 - iii. Lunges and side-to-side and front-back agility work

1. Side-to-side jumps and hops
2. Side-to-side steps
- iv. Single leg hopping off total gym
- v. Braiding
- vi. Jumping rope
- vii. Weight machines
 1. Increase weight and intensity for all lower extremity muscle groups
 2. 10% increases weekly
 3. Open and closed chain exercises
 4. Plyometrics

- vii. HEP