MPFL Reconstruction Post-op Protocol

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 hop test
      (3 consecutive SLH for distance at 90% of contralateral normal)

Post-op Phases:

1. Phase I (0-4 weeks)
   a. Brace: TROM locked in extension (with PWB for Dr. Loughran’s patients and WBAT for Dr. Cheatham’s patients), SLR with no extension lag, and good quad control
   b. Exercises:
      • Quad sets (SLR’s) hourly +/- e-stim in 4 directions
      • Ankle pumps, HS, and gluteal sets
      • Active extension from 90-50 degrees out of brace
      • Patella Mobs – superior/inferior and med/lat
      • AROM and PROM exercises from 0-90 degrees
      • Hip flexor exercises, hip abductor exercises
2. **Phase II** (5-8 weeks)
   a. Criteria to progress to phase II
      - Minimal swelling
      - Gait with full extension
      - Ability to lock knee while weight bearing
   b. Can discontinue brace beginning week 5 – *(Dr. Loughran’s patients will advance to FWB without crutches in this phase)*
   c. Exercises
      - Increase AROM/PROM beyond 90 degrees – no limits
      - Stationary bike – no resistance. Advance duration as tolerated
      - Resisted gastroc/soleus exercises with theraband only
      - Progress to bilateral toe raises and then unilateral toe raises
      - Resisted hamstring curls with therabands
      - Step-ups (lateral and forward) on 2-4 inch steps. Increase as tolerated.
      - Forward and backward walking with theraband around thighs
      - Ankle weights to SLR if no extension lag

3. **Phase III** (9-12 weeks)
   a. Criteria to progress to phase III
      - Full active extension and 110 degrees of flexion
      - No extension lag
      - Good quad control on single leg stance
      - Stairs foot over foot
      - WBAT
b. Program

- Stationary cycle with light resistance with RPM >80, progress to 20 minutes per day
- Leg Press or Total Gym with 40-45 degrees of knee flexion toward full extension
- Calf Raises using leg machine to add resistance
- Proprioception exercises: Balance board/ BABS
  - Theraband kicks (WB on operative leg)
  - Pool program if available
  - Resistance Walking forward/backward
  - Hip exercises with all muscle groups
- Stairstepper or seated Kinitron if no anterior knee pain: begin with 1-5 minutes with short steps (4”-6” ) and gradually increase to 15 minutes

4. **Phase IV (12 weeks +)**

a. Criteria to progress to phase IV

- Full AROM
- Normal gait
- No swelling, no pain

b. Program

- Increase intensity and resistance for exercises above
- Heel taps
- Start light agility drills with carioca and single-leg hopping on total gym
- Slow lunges with tubing

c. Exercises at 16 weeks
- Perform isokinetic testing (180deg/sec) or single leg hop 3 consecutive for distance
- Begin light jogging on treadmill
- Lunges and side-to-side and front-back agility work including side to side jumps, hops, and steps
- Single leg hopping off total gym
- Braiding
- Jumping rope
- Weight machines: increase weight and intensity for all lower extremity muscle groups, 10% increases every week, open and closed chain exercises, plyometrics
- HEP