Medial Patellofemoral Ligament Reconstruction/ Repair Protocol

PHASE: ACUTE CARE

- Bledsoe Brace locked at 0° for all activity until PT begins
- Gait Training with crutches- Brace @ 0°- including ↑↓ steps (if applicable)
- WBAT with Brace locked @ 0°
- Cryotherapy with elevation x 15 mins every 1-2 hours
- HEP instruction: Cryotherapy, Ankle pumps, Gluteal sets: NO Knee Flexion
- Acute Goals: Independent with HEP, transfers, gait, steps (if applicable)

PHASE I: 0-4 WEEKS

Knee ROM: 0-1 weeks: 0°
1-2 weeks: 0-30°
2-3 weeks: 0-60°
3-4 weeks: 0-90°
ROM limits also include Brace ROM settings

Weightbearing: WBAT with crutches and Brace locked at 0° for 4 weeks (unless otherwise indicated per MD)

Modalities: Cryotherapy with elevation 4x/ day
- IFC for pain/effusion
- NMES for quadriceps in full knee extension

Interventions: 1. Gait training- including ↑↓ steps (if applicable)
2. Saepa-McClure Technique
   - Bike AROM within ROM limits (see above)
   - Heat in stretch- knee extension- 10-20 minutes
   - Finish session with Ice in stretch- 10-20 minutes
   - Instruct HEP for 3rd End Range Stretch- 10-20 minutes
3. PROM/ AAROM to achieve knee ROM limits
4. Patellar mobilizations- Superior, Inferior, and Medial- AVOID Lateral glides
5. Scar Mobilization/ Massage
6. Flexibility- Hamstrings, Gastroc/Soleus
7. OKC Ther-Ex
   Quadriceps sets with Adductor Isometric
   SLR’s
   4-way Hip SLR’s
   Hamstring curls within ROM limits (see above)
   BioFeedBack for Quadriceps (if needed)

8. CKC Ther-Ex
   Heel Raises
   Balance & Proprioceptive activities
   @ 2 weeks: CKC Leg Press within ROM limits (see above)

9. Total Body Conditioning
   Cardiovascular (UBE), Core Stability, Upper Body exercises

HEP: Cryotherapy with elevation, Quadriceps sets with adductor isometric, SLR’s, Gluteal sets, Ankle Pumps, Hourly Gait as tolerated, AROM and PROM within brace settings (see ROM limits above)

**PHASE II: 4-6 WEEKS**

Knee ROM: 4-5 weeks: 0-110°
5-6 weeks: 0-120+°
ROM limits also include Brace ROM settings
If Patient’s ROM is > or = to 120° at 6 weeks, then D/C brace (NO sooner than 6 weeks)

Weightbearing: @ 4 weeks: allow WBAT with Brace open to 90° and use of crutches
   4-6 weeks: transition from 2 crutches, to 1 crutch, to no crutch as quadriceps control allows

Modalities: Cryotherapy with elevation
   IFC for Pain/ Effusion
   NMES for quadriceps
   Biofeedback for quadriceps

Interventions: 1. Gait Training- transitioning off of crutches (see above)
   2. Saega-McClure Technique
      Bike AROM within ROM limits (see above)
      @ 5 weeks: Add resistance to biking; may begin elliptical training
      Heat in stretch- knee extension- 10-20 minutes
   3. PROM/ AAROM to achieve ROM limits (see above)
   4. Patellar mobilizations- Superior, Inferior, Medial (AVOID lateral glides)
   5. Scar mobilization/ massage
   6. Flexibility- Hamstrings, Gastroc/Soleus
   7. OKC Ther-Ex
      Multi-Angle Isometric Quadriceps
      Short Arc Quadriceps in ROM (without chondrosis)
      Hamstring Isotonics
      Total Leg Strengthening- Multi-Hip, Multi-Ankle
   8. CKC Ther-Ex
Mini-squats
CKC Knee Extension “standing TKE’s”
Leg Press
Step-Ups- Forward ↑, Forward ↓, Lateral
Partial Lunges
Balance & Proprioceptive Exercises- BAPS, Rockerboards, Foam Rolls,
AirEx, Single Leg Balance
Heel Raises- Single Leg

9. Total Body Conditioning
   Cardiovascular (UBE), Core Stability, Upper Body exercises

HEP: End ROM stretching, PROM/ AAROM to limits, Gait without compensation, Flexibility exercises, Cryotherapy as needed

PHASE III: 6-12 WEEKS
Knee ROM: 6 +: Full ROM

Weightbearing: Full with no Limitations

Modalities: Cryotherapy with elevation (as needed)
           NMES quadriceps (as needed)

Interventions: 1. Gait Training- avoid compensation
               2. Sapega-McClure Technique (if needed- see above)
               Biking, Elliptical, Stairmaster with resistance
               3. PROM/ AAROM to full ROM
               4. Patellar Mobilizations- Superior, Inferior, Medial (to normal mobility)
               5. Scar Mobilization/ Massage
               6. OKC Ther-Ex
               @ 6 weeks: OKC quads 0-45°
               @ 8 weeks: OKC quads 0-90°
               Isokinetic quadriceps/hamstrings in ROM without chondrosis
               Hamstring Isotonics
               Total Leg Strengthening- Multi-Hip, Multi-Ankle
               7. CKC Ther-Ex
               Squats 0-90°
               Lunges
               Leg Press with ↑ resistance
               Step-Ups with ↑ step height
               Balance & Proprioceptive Exercises- ↑ demand from phase II, Gray
               Functional Reach Series
               8. Total Body Conditioning
               Cardiovascular Conditioning, Core Stability, Upper Body Exercises

HEP: Flexibility Exercises, maintenance of ROM, cryotherapy as needed, normalization of activity
**PHASE IV: 12 + WEEKS**

@ 12 weeks: Add Impact Activities if 75% strength  
@ 12 weeks: Add light Agility Activities if 75% strength  

Testing: Linea or Biodex per MD request (usually minimum of 12 weeks)  
LEFT Test if strength results minimum 75%

**Return to Work/ Sport**

No Pain/ Effusion  
Full Pain-Free ROM  
Strength Testing- 90%  
Functional Testing- 90%  
MD Approval (4-6 months)