

MPFL RECONSTRUCTION/PROXIMAL REALIGNMENT POST OPERATIVE PROTOCOL

Phase I – Tissue Protection/Healing Phase (0-4 weeks)

GOALS:

- 1) Reduce pain
- 2) Reduce effusion
- 3) minimize scar adhesion formation
- 4) Achieve full knee extension ROM
- 5) Facilitate quadriceps activation
- 6) Protect from excessive patellar lateral stress or genu valgus stress

ROM:

PROM/AAROM/AROM (0°-MD prescribed limit)

EXERCISE:

Multiangle Quad Isometrics (per ROM limits)
SLR ABD/add/ext (brace locked)
Calf Raises
Single Limb Stance

MANUAL:

Patella Mobilizations (caution lateral glide)
Soft Tissue Mobilization patellar tendon

MODALITIES:

Functional Electrical Stimulation (not directly on the VMO)
Biofeedback
Cryotherapy

Criterion for Progression:

- 1) *Voluntary quadriceps isometric contraction*
- 2) *Full knee extension AROM*
- 3) *Knee ROM 0°-30°*

Phase II – Tissue Proliferation Phase/Progression Phase (5-8 weeks)

GOALS:

- 1) Pain and edema control
- 2) Minimize scar adhesion formation
- 3) Improve knee AROM
- 4) Strength progression-develop functional quad control
- 5) Normalize gait pattern

ROM:

PROM/AAROM/AROM
Stationary Bike for ROM

EXERCISE:

SLR flexion (brace locked)
Side lying hip ABD/ER
Wall Sits (30°)
WB Terminal Knee Extension (30°-0°)
Open Chain Knee Ext (90°-30°)
Open Chain Knee Flex (0°-90°)
Closed Chain knee flex/ext (80°-0°)
Step up/down
Balance Board/Wobble Board (Bilateral)

MANUAL:

Initiate Scar mobilization

MODALITIES:

Patellar taping; medial glide

CV EXERCISE:

Bike, Elliptical, Stair climber (ROM permitting)
Swimming-flutter kick only

Weight Bearing

- NWB x ____ wks
- TDWB x ____ wks
- PWB ____% x ____ wks
- WBAT
- Brace Locked in Ext x ____ wks

ROM

- Full ROM
- Locked full ext x ____ wks
- Locked at ____° x ____ wks
- ROM limits
____° to ____° x ____ wks
____° to ____° x ____ wks
____° to ____° x ____ wks

CPM

- ____° to ____° x ____ wks
- 30-70° increase 10°/d @ dir
- None

Recommended Clinical Guidelines

WB: TDWB x 1 weeks
WBAT week 2
BRACE: Locked 0°/0°
x 6 weeks w/ ambulation
ROM: 0°-30° week 1-4
0°-60° week 5
0°-90° week 6

Precautions

Estimated Return to Sport:

Criterion for Progression:

- 1) *Minimal to no effusion/edema*
- 2) *Knee ROM 0°-90° by week 6*
- 3) *Full patellar mobility*
- 4) *No extensor lag with SLR*
- 5) *Ambulate on level surfaced without brace with quad control*

Phase III – Tissue Remodeling/Hypertrophy Phase (9-18 weeks)

GOALS

- 1) Full knee AROM
- 2) Improve eccentric quad control
- 3) Initiate advanced SL proprioception activities and lateral motion
- 4) Strength progression
- 5) Begin light jogging week 16

ROM:

ROM to full

EXERCISE:

Initiate lateral motion
Single limb balance with perturbations

CV Exercise:

Initiate jogging by week 16

Criterion for Progression:

- 1) *No edema/effusion*
- 2) *Full ROM*
- 3) *20 reps to 60 degrees single limb squat with eccentric control and good lower extremity alignment*
- 4) *Quad strength >80% of uninvolved LE (10RM single leg press or isokinetically if available)*
- 5) *Jogging without pain or antalgic gait*

Phase IV – Sport Specific Training (19-24)

GOALS:

- 1) Begin sport specific drills
- 2) Normalize neuromuscular control
- 3) Normalize jumping/landing mechanics if indicated
- 4) Prepare to return to sport

EXERCISE:

Progress on running progression
Begin agility progression
Begin plyometric progression
Progress on sport specific training
Swimming – initiate whip kick/breast stroke (week 24)
Cutting sports and Golf (week 24)

Criterion for Return to Sport:

(Recommend combination testing of strength, agility, and power according to available resources/clinic setting)³

- 1) **Lower Extremity Functional Test (LEFT)**
- 2) **Hop Tests – Single Hop, X-Hop, Triple Hop, Timed Hop \geq 85% uninvolved**
- 3) **Single leg squat to 60 degrees knee flexion with good control for 3 minutes**
- 4) **Quad strength > 90% of uninvolved (10RM leg press or isokinetic testing)**
- 5) **IKDC (MCID 6.3@ 6mo; 16.7 @ 12 mo)**