Boulder Centre for Orthopedics & Spine
Your Life in Motion

Brian P. Davis, MD
Sports Medicine, Shoulder, Knee, & Elbow Surgeon
office: 303.449.2730

PATELLOFEMORAL JOINT MICROFRACTURE

POST OPERATIVE PROTOCOL

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 2 weeks
WBAT weeks 3-8
(brace locked in ext)
ROM: CPM or AROM
4-8 hours/day x 6-8 wks

Estimated Return to Sport:

Notes:

Phase I – Tissue Protection/Healing Phase (0-8 weeks)

GOALS:
1) Reduce pain
2) Facilitate new cartilage formation
3) minimize scar adhesion formation
4) Improve knee ROM
5) Facilitate quadriceps activation

ROM:
PROM/AAROM/AROM
Bike: Rocking to full revolution as ROM allows

EXERCISE:
Quad isometrics
SLR—4 way (flex/abd/ext/add)
Clamshells
Hamstring Isometrics

MANUAL:
Patella Mobilization
Patellar tendon mobilizxation
Extension with overpressure

MODALITIES:
Functional Electrical Stimulation
Biofeedback
Cryotherapy

Criterion for Progression:
1) Voluntary quadriceps isometric contraction
2) No extensor lag with SLR
3) Good patellar mobility
4) Knee ROM full knee extension equaling opposite LE to functional knee flexion

Phase II – Tissue Proliferation Phase/Progression Phase (9-12 weeks)

GOALS:
1) Pain and edema control
2) Maximize knee ROM
3) Strength progression-develop functional quad control
4) Achieve normal gait

ROM:
PROM/AAROM/AROM
Stationary Bike for ROM

EXERCISE:
Squats/leg press (60°-0°)
Closed chain terminal knee extension
Calf Raises
LAQ OKC
Weight shifting/balance/perturbation training
Bridging progression
Step ups, Step downs, lateral step downs

MANUAL:
Scar mobilization
Patellar mobilization

MODALITIES:
Continue PRN

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CV EXERCISE:
Biking, Treadmill walking, retro-walking on treadmill, swimming

Criterion for Progression:
1) Minimal to no effusion/edema
2) ROM equal to opposite LE
3) Full patellar mobility
4) Ambulate on level surfaced with normal gait

Phase III – Tissue Remodeling/Hypertrophy Phase (12-24 weeks)

GOALS
1) Normalize eccentric quad control
2) Strength progression
3) Begin sport specific agility drills

ROM:
PRN

EXERCISE:
Advanced strength/proprioception/balance
Full squat to 90° (as tolerated)
Single leg squat to 60° (as tolerated)
Initiate jogging progression
Lateral motion/stepping

CV Exercise:
Outdoor walking/hiking
Swimming

Criterion for Progression:
1) No pain or 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)

Phase IV – Sport Specific Training (6 months+)
If desired by and patient and cleared by MD

GOALS:
1) Begin sport specific drills
2) Normalize neuromuscular control
3) Normalize jumping/landing mechanics if indicated
4) Return to sport

EXERCISE:
Agility progression
Begin plyometric progression
Jogging progression/sports-specific training

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 >=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)