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Notes:

****This protocol is designed to serve as a guide for the rehabilitation process. It is not intended to supersede clinical judgment and decision making. Progression rough each phase is designed to allow for maximal tissue healing of repaired tissues and is based on scientific evidence and clinical experience***

Criterion for Progression:

1)Minimal to no edema
2)Full knee AROM
3)Non-antalgic gait
4)Full Patellar Mobility

Phase III – Tissue Remodeling/Hypertrophy Phase (weeks 6-12)

Goals: 1)Develop functional eccentric quad control
2)Quad strength > 80% of uninvolved LE
3)Initiate lateral motions and proprioception activities

Exercise: Step ups/downs[7,3,9]
Balance Board bilateral[3]
Single limb balance with perturbations[3,9]
Single leg squat[3,9]
Lateral Motions/Stepping[4]

CV Exercise: Stationary Bike
Elliptical
Swimming- flutter kick (progressing to whip kick week 8)

Criterion for Progression:

1)Quad strength> 80% of uninvolved LE
2)No pain or gapping with valgus stress test/ Normal Clinical Exam
3)Able to perform single leg squat with good eccentric quad control and lower quarter alignment
4)No pain or effusion

Phase IV – Sport Specific Training (weeks 8-12)

Goals: 1)Begin sport specific drills
2)Begin running progression
3)Normalize neuromuscular control
4)Normalize jumping/landing mechanics if indicated
5)Gradual return to sport

Exercise: Begin jogging progression
Begin agility progression
Begin plyometric progression

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)[13]
2)Hop Tests – Single Hop, X-Hop, Triple Hop, Timed Hop >=85% uninvolved[1,6,8-11]
3)Single leg squat to 60 degrees knee flexion with good control for 3 minutes[7,8,10]
4)Quad strength > 90% of uninvolved (10RM leg press or isokinetic testing)[12]
5)IKDC (MCID 6.3@ 6mo; 16.7 @ 12 mo)[2,4,5]

Estimated Return to Sport:

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MCL TEAR OF THE KNEE

Weight Bearing

☐NWB x _____ wks
☐TDWB x _____wks
☐PWB ___% x _____wks
☐WBAT
☐Brace Locked in Ext x ____ wks

Brace

Brace : _____ weeks

With Sleep: _____weeks

ROM

☐Full ROM
☐Locked full ext x ____wks
☐Locked at ____° x ____wks
☐ROM limits
____° to____° x____wks
____° to____° x____wks
____° to____° x____wks
____° to____° x____wks

CPM

☐ ___° to ___° x ___wks
☐30-70° ⇧10°/d @ dir
☐None

☐**Recommended Clinical Guidelines**

WB: NWB x 1 week
TDWB x week 2
WBAT week 3

ROM:

Brace: Locked at 30 degrees during gait x 3 weeks

☐**Precautions**

Perform Progressive Resistive Exercise (PRE) in tibial IR x 4-6 weeks[12]

Phase I – Tissue Protection/Healing Phase (weeks 0-2)

Goals: 1)Reduce pain
2)Reduce effusion
3)Achieve full knee extension ROM
4)Facilitate quadriceps activation
5)Improve knee ROM
6)Protect against valgus stress to knee

ROM: PROM/AAROM/AROM (0-MD prescribed limit)
Gastroc/Soleus/Hams/Quad stretch
Exercise: Quad isometrics
SLR flex/abd/ext
Open chain knee extension (90-45)[10,2,5,4]
Manual: Patellar Mobilization[8]
Soft Tissue Mobilization
Modalities: Cryotherapy[13-16]
Functional Electrical Stimulation at Quads[6]

Criterion for Progression:
1)Voluntary quadriceps isometric contraction
2)Full knee extension AROM
3)No extensor lag with SLR
4)Knee AROM 0-90 degrees

Phase II – Tissue Proliferation Phase/Progression Phase (weeks 3-6)

Goals: 1)Progress to WBAT gait by week 6
2)Achieve full knee AROM
3)Protect ligament healing maintaining tibial IR with exercise
4)Strength progression
5)Normalize gait pattern

ROM: PROM/AAROM/AROM (0-MD prescribed limit)
Stationary Bike for ROM
Gait Training: Treadmill Walking
Exercise: Open chain knee extension (90-15)[10,5,4]
Standing calf raises
Wall squat/Mini squats (15-45, feet in IR)[7,12]
Shuttle/Leg Press (15-70, feet in IR)[10,12]
Manual : Patellar Mobilization[8]
Soft Tissue Mobilization
Modalities: Cryotherapy[13-16]
Functional Electrical Stimulation at Quads[6]