Sutter Health

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MCL Repair/Reconstruction:

The intent of this protocol is to provide the therapist with guidelines of the post-operative rehabilitation course after an MCL repair/reconstruction. It should not be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam findings, individual progress, and/or the presence of post-operative complications. The therapist should consult the referring physician with any questions or concerns.

INDIVIDUAL CONSIDERATIONS:

General Considerations

Weight-bearing

- WBAT
- Weeks 0-1: Brace locked in extension
- Weeks 1-6: Brace 0-90 flexion
- Week 6+: discontinue brace

Exercises

- Immediate quadriceps rehab and closed chain exercise
- Avoid active hamstring rehab for 8-12 weeks (to decrease stress on the posteromedial corner

Phase I (Weeks 0-2)

Goals
- Control inflammation and pain
- Full active extension
- Achieve quadriceps control

Brace
- Locked in extension
- Keep brace on for NWB exercises in order to protect the knee from valgus stress

Weight-Bearing Status
- WBAT

Therapeutic Exercises
- SLR in all planes (with brace locked in extension)
- Calf pumps, quadriceps sets
- Electrical stimulation as needed
- Patellar mobilization
- Balancing activities on a stable platform with eyes open and closed

Phase II (Weeks 3-6)

Criteria
- Good quad set and SLR with brace
- Full extension
- No active inflammation

Goals
- Achieve 120 degrees of flexion
- Protect graft fixation

Brace/Weight-bearing status
- Continue NWB with brace locked in extension

Therapeutic Exercises
- Begin ROM
    - Prone passive knee flexion to 120° with care to avoid posterior tibial sag
- Wall slides then progress to mini-squats (0-45°) when quad control is good
    - **AVOID** if PLC reconstruction was performed for 8 weeks

- Pool walking to restore normal gait pattern
- Toe raises
- Gastroc stretches
- Ankle strengthening with sports tubing (Theraband)

Phase III (Weeks 7-12)

Criteria

- Knee flexion to 120 degrees
- No active inflammation
- Good quadriceps control

Goals

- Achieve full flexion
- Establish normal gait
- Progress with strengthening and endurance

Brace/Weight-Bearing Status

- WBAT with brace unlocked, may discontinue brace when normal gait is established for ACL/PCL and/or MCL reconstructions
- PWB with brace locked in extension for PLC reconstruction

Therapeutic Exercise

- Begin active knee flexion at 6 weeks for ACL/PCL and/or MCL and at 8 weeks for PLC reconstruction
- Begin the following at 6 weeks for ACL/PCL and/or MCL and at 8 weeks for PLC reconstruction
    - Stationary bike (low resistance, high seat, with no toe clips---so as to prevent hamstring contraction)
    - Mini-squats to 45 degrees
    - Leg press to 60 degrees
    - Stairmaster/Elliptical trainer
    - Proprioception
        - Mini-tramp standing
        - Unstable platform (BAPS) with eyes open and closed
        - Standing ball throwing and catching

Phase IV (Months 3-6)

Criteria

- Full, pain-free range of motion
- No patellofemoral irritation
- Sufficient strength and proprioception to progress to functional activities
- Normal gait

Goals

- Improve strength and proprioception
- Maintain FROM

Therapeutic Exercises

- Progress with flexibility and closed-chain strengthening program
- Swimming (no breast stroke)
- Stationary bike (may increase resistance)
- Box steps (6 and 12 inches)
- Jogging, straight ahead, may be started around 4-5 months when quad strength is 90% of contralateral side

Phase V (Months 6-9)

Criteria

- Full, pain-free motion
- No effusion
- Sufficient hamstring and quadriceps strength to progress to agility exercises

Goals

- Return to all recreational and sporting activities by 9 months
- Maintain full, painless motionProgress with strengthening, agility, and endurance

Therapeutic Exercises

- Progress with closed chain quadriceps and hamstring strengthening
- Plyometrics
    - Stair jogging
    - Box jumps (6 to 12-inch heights)
- Proprioception
    - Mini-tramp bouncing
    - Lateral slide board
    - Ball throwing and catching on unstable surface
- Functional Training
    - Running
    - Figure-of-eight pattern
- Agility
    - Start at slow speed
    - Shuttle run, lateral slides, Carioca cross-overs
    - Plyometrics
    - Stair running
    - Box jumps (1-2 foot heights)

- At 8 months, may start…
  - Sports specific training (start at 25% speed and increase as tolerated)
  - Incorporate cutting
  - Increase heights for plyometric conditioning

Criteria for Return to Sports

- Usually occurs at 9-12 months post-op
- Full, painless range of motion
- No effusion
- Quadriceps and hamstring strength 90% of contralateral side
- No apprehension with all sports specific drills