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Post-operative Rehabilitation Protocol
ACL & MCL or Posterolateral Corner Reconstruction

Patient will be in a brace, full ROM and touch down weight bearing for 6 weeks post op.

**Phase I: Immediate post-operative** (weeks 1-6)

**Goals:**

- Protect graft and graft fixation
- Control inflammation/swelling
- 0-120 flexion AROM as tolerated first 4 weeks.
- Educate patient on rehabilitation progression
- Restore normal gait on level surfaces

**Weight bearing Status:**

- TDWB x 6 weeks with crutches
- Brace full ROM. Sleep with locked in extension.

**Exercises:**

- Patellar mobilization/scar mobilization
- Hamstring curls – add weight as tolerated
- Heel slides
- Quad sets (consider NMES for poor quad sets)
- Gastroc/Soleus stretching
- Hamstring stretches
- Gastroc/Soleus strengthening
- SLR, all planes. Add weight as tolerated to hip abduction, adduction and extension.
- If available, deep-water jogging for ROM and swelling.
- Closed Kinetic Chain Quadriceps strengthening activities as tolerated (wall sit, step ups, mini squats, leg press 90-30 degrees)
- Quadriceps isometrics at 60° and 90°
- If available, aquatics for normalizing gait, weight bearing and strengthening
- Balance/Proprioception
• Stationary Bike – initially for promotion of ROM – progress light resistance as tolerated

Criteria for advancement to Phase II:
• Full PROM flexion/extension
• Good quad set, SLR without extension lag
• Minimal swelling/inflammation
• Normal gait on level surfaces

**PHASE II: Post-operative weeks 6 to 10**

**D/C brace at week 6 and advance to WBAT**

Goals:
• Restore normal gait with stair climbing
• Maintain full extension, progress toward full flexion range of motion
• Protect graft and graft fixation
• Increase hip, quadriceps, hamstring and calf strength
• Increase proprioception

Exercises:
• Continue with range of motion/flexibility exercises as appropriate for the patient
• Continue closed kinetic chain strengthening as above progressing as tolerated – can include one-leg squats, leg press, step ups at increased height, partial lunges, deeper wall sits, lunge walks.
• Stairmaster (begin with short steps, avoid hyperextension)
• Nordic Trac or elliptical machine for conditioning.
• Stationary bike - progress time and resistance as tolerated
• Continue to progress proprioceptive activities - ball toss, balance beam, mini-tramp balance
• Continue hamstring, gastroc/soleus stretches
• Continue to progress hip, hamstring and calf strengthening as tolerated
• If available, begin running in the pool (waist deep) or on an unweighted treadmill at 8 weeks.

Criteria to advance to Phase III include:
• No patellofemoral pain
• Minimum of 120 degrees of flexion
• Sufficient strength and proprioception to initiate running.
• Minimal swelling/inflammation

**PHASE III: Post-operative weeks 10 to 16**

Goals:
• Full range of motion
• Improve strength, endurance and proprioception of the lower extremity to prepare for sport activities
• Avoid overstressing the graft
• Protect the patellofemoral joint
• Normal running mechanics
• Strength approximately 70% of the uninvolved lower extremity per isokinetic evaluation (if available)

Exercises:
• Continue flexibility and ROM exercises as appropriate for patient.
• Initiate OKC Knee extensions 90°-30°, progress to eccentrics.
• If available, isokinetics (with anti-shear device) – begin with mid-range speeds (120°/sec- 240°/sec).
• **Progress toward full weight bearing running at 12 weeks**
  • Begin swimming if desired.
  • Recommend isokinetic test with anti-shear device at 12 weeks to guide continued strengthening.
  • Progressive hip, quadriceps, hamstring, calf strengthening.
  • Cardiovascular/endurance training via Stairmaster, elliptical, bike.
  • Advance proprioceptive activities.

Criteria for advancement to Phase IV:
• No significant swelling/inflammation.
• Full, pain-free ROM.
• No evidence of patellofemoral joint irritation.
• Strength approximately 70% of uninvolved lower extremity per isokinetic evaluation.
• Sufficient strength and proprioception to initiate agility activities.
• Normal running gait.

**PHASE IV: Post-operative months 4 through 6**

Goals:
• Symmetric performance of basic and sport specific agility drills.
• Single hop and 3 hop tests 85% of uninvolved lower extremity.
• Quadriceps and hamstring strength at least 85% of uninvolved lower extremity per isokinetic strength test.

Exercises:
• Continue and progress flexibility and strengthening program based on individual needs and deficits.
• Initiate plyometric program as appropriate for patient’s athletic goals.
• Agility progression including, but not limited to:
  Side steps
  Crossovers
  Figure 8 running
  Shuttle running
  One leg and two leg jumping
  Cutting
  Acceleration/deceleration/sprints
  Agility ladder drills
  Continue progression of running distance based on patient needs.
  Initiate sport-specific drills as appropriate for patient
  Assessment of running on treadmill.

Criteria for advancement to Phase V:
• No patellofemoral or soft tissue complaint.
• Necessary joint ROM, strength, endurance, and proprioception to safely return to work or athletics.

**PHASE V: Begins at 6 months post-op**

Goals:
• Safe return to athletics/work.
• Maintenance of strength, endurance, proprioception.
• Patient education with regards to any possible limitations.

Exercises:
- Gradual return to sports participation
- OK to return to practice and gradually reintegrate into practice based scrimmaging
- Maintenance program for strength, endurance