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ACL Reconstruction Rehabilitation Framework

Preoperative Phase

- *KT-1000, CA-4000.
- *Isokinetic test (chronic).
- * Brace fitting.
- * Cryo/Cuff instruction
- * Crutch ambulation training.
- * Post Op exercise instruction.
 - Quad sets
 - Leg lifts
 - Active flexion/passive extension
 - Patella mobilization
 - Quadriceps/Hamstrings isometrics at 90°
- * Quadriceps re-education.
- * Restoration/Improvement of ROM.
- * Reduction of edema/inflammation.
- * Instruction in brace routine.

Post Op Phases

Hospital Phase

- * CPM 0-60° during day progress to 90°.
- * Locked at 0° in brace overnight.
- * Ambulate PWB with crutches (patellar tendon), TTWB with crutches (STG), and brace locked.
- * Instruct/Review home exercises.
- * Dressing change.
- * Cryo/Cuff PRN.

Discharge Criteria:

PROM to 90°
Independent in ambulation/transfers
Independent in exercise and brace routine
Pain controlled

1-4 Weeks Post-Op

- * Progressive weight bearing, PWB-WBAT (PTG).
- * Progressive weight bearing, TTWB-PWB (STG).
- * Progress ROM 0-120°
- * Hip and hamstring PRE's
- * Quadriceps re-education (electrical stim, biofeedback).
- * Leg press in 90-40° arc, start with eccentrics and light weight.
- * LIDO exercises: CPM, isometrics at 90°, active flexion/passive extension.
- * Emphasize patellar mobilization.
- * Cardiovascular exercises as tolerated.
- * short crank bicycle ergometry.
- * Cryotherapy.
- * Continue with home exercise program.

4-6 Weeks Post-Op

- * Progress to FWB with brace set 0-50° and crutches
- * Ambulation training in Aquatrex.
- * Progress ROM as tolerated.
- * Leg press in 90-30° arc.
- * Calf raises.
- * Bicycle ergometer.
- * LIDO exercises: isometrics, active flexion/passive extension, concentric/eccentric hamstrings.
- * KT-1000 at 6 weeks.
- * Brace change at 6 weeks.

6-12 Weeks Post Op

- * Restore normal gait, discontinue crutches when gait is not antalgic.
- * Begin squat/step program.
- * Begin proprioception program.
- * Quadriceps isotonic (knee extension) allowed with distal pad in 90-40° arc (Closed chain activities preferred, i.e.. leg press, partial squats, wall slides, etc.).
- * Begin Retro program.

6-12 Weeks Post Op (Cont.)

- * Continue with endurance activities.
- * LIDO exercises: isotonic, quadriceps eccentrics with proximal pad, hamstring concentrics/eccentrics.
- * Nordic track.

12-20 Weeks Post Op

- * Continue with lower extremity PRE's.
- * Quadriceps isotonic (knee extension) in 90-30° arc.
- * Begin functional exercise program.
- * Progress endurance activities.
- * Maintain/Improve flexibility in lower extremities.
- * LIDO exercises: Isokinetics in 90-30° arc with distal pad, quadriceps eccentrics in 20-80° arc, test at 120°/s and 240°/s prior to onset of running program.
- * Begin running program (PWB-FWB).
- * KT-1000 at 3 months post-op.

20-28 Weeks Post-Op

- * Advance to full arc PRE's to restore strength, emphasizing quadriceps.
- * Agility exercises.
- * Advanced functional exercises.
- * Continue/Progress running program.
- * LIDO exercises: Isokinetic test at 20 weeks (60, 180, 240°/s), full arc isokinetics in velocity spectrum.
- * Functional test assessment at 24 weeks.
- * KT-1000 test at 24 weeks.
- * Return to limited sporting activities.

28-40 Weeks Post-Op

- * Restore strength, function, endurance, and agility of lower extremity.
- * Functional test assessment.
- * Isokinetic test.
- * Return to full activity.