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 isotonics (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: isotonics, quadriceps eccentrics with proximal pad, hamstring concentrics/eccentrics.
* Nordic track.

12-20 Weeks Post Op

* Continue with lower extremity PRE’s.
* Quadriceps isotonics (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.