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Anterior Cruciate Ligament & Posterior Lateral Corner Reconstruction (With or without LCL / MCL) Combined Reconstruction Surgery Rehabilitation

I. Immediate Postoperative Phase

POD 1

Brace - Hinged knee brace - locked at zero degrees extension

Weight bearing - 2 crutches WBAT (weight should be added only as comfort permits)

Exercises

- * ankle pumps
- * quad sets
- * straight leg raises (3 way) Hip flexion, abduction, adduction
- * Knee extensions 60-0 degrees

Muscle stimulation - Muscle stimulation to quads (4 hours a day) during quad sets

CPM - zero to 60 degrees as tolerated (prn)

Ice and elevation - Ice 20 minutes out of every hour and elevate with knee in extension

II. Maximum Protection (week 2-6)

GOALS: Absolute control of external forces to protect graft

Nourish articular cartilage

Decrease swelling

Decrease fibrosis

Prevent quad atrophy

A. Week Two

Brace - Hinged knee brace - locked at zero degrees

Continue to perform intermittent ROM exercises

Weight bearing as tolerated 50% or greater

Exercise

- * Multi angle isometrics 60, 40, 20 degrees
- * quad sets
- * knee extension 60-0 degrees
- * Intermittent ROM 0-60 (4-5 times daily)
- * Patellar Mobilization

- * Well leg bicycle
- * Proprioception training squats (0-45 degrees)
- * Continue electrical stimulation to quads
- * Leg press (0-60 degrees)
- * Continue ice and elevation

B: Week Four

Brace - Hinged knee brace locked at zero

Full weight bearing - no crutches, one crutch if necessary

KT 1000 Test - performed

Exercises

- * weight shifts
- * mini-squats 0-45 degrees
- * Intermittent ROM 0-90 degrees
- * Knee extension 80-40 degrees (therapist discretion)
- * Pool walking
- * Initiate bike for ROM and endurance

C: Week Five

- * Initiate pool exercises
- * Fit for functional PCL brace (only if directed by physician - most cases)

III. Controlled Ambulation Phase (week 6-9)

Criteria to Enter Phase III

- * AROM 0-115 degrees
- * Quad strength 60% > contralateral side
(isometric test) (60 degrees knee flexion angle)
 - Unchanged KT Test (+1 or less)
 - **GOALS:** Control forces during ambulation

Brace - Discontinue locked brace, brace opened 0-125 degrees

KT 1000 Test - (Week 6 & 8, 20 & 30 lb test)

Exercises

- * same as week four
- * PROM- 0-130 degrees
- * Initiate swimming
- * Initiate step-ups(start with 2' and gradually increase)
- * Increase proprioception training

IV. Moderate Protection Phase (Week 9-14)

Criteria to Enter Phase IV

- * AROM 0-125 degrees
- * Quad strength 60% of contralateral leg (isokinetic test)
- * No change in KT scores (+2 or less)
- * Minimal effusion
- * No patellofemoral complaints
- * Satisfactory clinical exam

GOALS: Protect patellofemoral joint's articular cartilage

Maximal strengthening for quads, lower extremity

KT 1000 Test - (Week 12)

Isokinetic Test - (Week 10-12)

Exercises

- * Emphasis eccentric quad work
- * Continue closed chain exercises, step-ups, mini-squats, leg press
- * Continue knee extension 90-40 degrees
- * Hip abduction/adduction
- * Hamstring curls and stretches
- * Calf raises
- * Bicycle for endurance
- * Pool running (forward/backward)
- * Walking program
- * Stairmaster
 - Initiate isokinetic work 100-40

Light Activity Phase (Month 3-4)

Criteria to Enter Phase V-

- * AROM 0-125 degrees >
- * Quad strength 70% of contralateral side, knee flexor/extensor rated 70-79%
- * No change in KT scores (+2 or less)
- * Minimal/no effusion
- * Satisfactory clinical exam

GOALS: Development of strength, power and endurance

Begin to prepare for return to functional activities

Test - Isokinetic test (Week 10-12 and 16-18)

Exercises

- * Continue strengthening exercises
- * Initiate plyometric program
- * Initiate running program
- * Initiate agility drills
- * Sport specific training and drills

Criteria to initiate running program

- * Satisfactory isokinetic test
- * Unchanged KT results
- * Functional test 70% > contralateral leg
- * Satisfactory clinical exam

VI. RETURN TO ACTIVITY (Month 5-6)

Criteria to return to activities

- * Isokinetic test that fulfills criteria
- * KT 1000 Test unchanged
- * Functional Test 80% > contralateral leg
- * Satisfactory clinical exam

GOALS: Achieve maximal strength and further enhance neuromuscular coordination and endurance

Test - Isokinetic test prior to return, KT 2000, functional test

Exercises

- * Continue strengthening programs
- * Continue closed chain strengthening program
- * Continue plyometric program
- * Continue running and agility program
- * Accelerate sport specific training and drills

6 MONTH FOLLOW-UP

- * KT 2000 Test
- * Isokinetic Test
- * Functional Test

12 MONTH FOLLOW-UP

- * KT 2000 Test
- * Isokinetic Test
 - Functional Test