Roidis Nikolaos, MD, PhD, DSc Senior Consultant Orthopaedic Surgeon 3rd Orthopaedic Department KAT Hospital

ACL RECONSTRUCTION WITH MENISCUS REPAIR POST-SURGICAL REHABILITATION PROTOCOL

POST-OP DAYS 1 - 14

- Dressing:
- POD 1: Debulk dressing, TED Hose in place
- POD 2: Change dressing, keep wound covered, continue TED Hose
- POD 7-10: Sutures out, D/C TED Hose when effusion resolved
- Brace x 6 weeks Locked in extension for ambulation
- Crutches Partial weight bearing (PWB) in brace
- Patellar mobilization (teach patient)
- Calf pumping
- AAROM 0-90 degrees (passive extension, heel slides with towel assist)
- Passive extension with heel on bolster or prone hangs
- No active Hamstring exercises
- Electrical stimulation in full extension with quad sets and SLR
- Quad sets
- Straight leg raise (SLR) x 4 on mat (in brace if poor quad control)
- Stationary bike for range of motion 0-90 degrees
- Ice pack with knee in full extension after exercise

GOALS

- Full passive extension
- Flexion to 90 degrees
- Good quad control

Weeks 2 - 4

- Brace x 6 weeks Open to 0-90 degrees
- Crutches PWB in brace
- Continue appropriate previous exercises
- Scar massage when incision healed
- PROM, AAROM 0-90 degrees only
- No active Hamstring exercises
- Co-contractions quads / HS
- SLR x 4 on mat Add light ankle weights if quad control is maintained
- Double leg heel raises
- Stretches HS, AT, Hip Flexors, ITB

GOALS

- Pain/effusion control
- No extensor lag

WEEKS 4 - 6

- Brace x 6 weeks Open to 0-90 degrees
- Crutches PWB in brace

- Continue appropriate previous exercises
- AAROM, AROM 0-90 degrees only
- Weight shifts
- Mini squats 0-45 degrees In parallel bars
- Total Gym (level 3-5) Mini squats 0-45 degrees
- Passive flexion to 90 degrees (push up with opposite leg)
- Leg press 0-45 degrees with light resistance (up to ¼ body weight)
- Hamstring curls 0-45 degrees Carpet drags or rolling stool (closed chain)
- Stationary bike with seat high for ROM Complete cycle as able

GOALS

- ROM 0-90 degrees
- No effusion

WEEKS 6 - 9

- D/C Brace
- Crutches weight bearing as tolerated (WBAT), D/C when gait is WNL
- Continue appropriate previous exercises
- PROM, AAROM, AROM Gradually increase motion through full range
- Standing SLR x 4 with light Theraband bilaterally
- Wall squats 0-45 degrees
- Leg press 0-60 degrees with light resistance (up to ½ body weight)
- Hamstring curls 0-60 degrees Carpet drags or rolling stool (closed chain)
- Forward, lateral and retro step downs in parallel bars
- No knee flexion past 45 degrees (small step)
- Single leg heel raises
- Proprioceptive training Single leg standing in parallel bars
- Double leg BAPS for weight shift
- Treadmill Forwards and backwards walking
- Stationary bike Progressive resistance and time
- Pool Walking / running (no kicking)

GOALS

- Full ROM
- Normal gait

WEEKS 9 - 12

- Continue appropriate previous exercises with progressive resistance
- Wall squats 0-90 degrees
- Leg press 0-90 degrees with resistance as tolerated
- Hamstring curls 0-90 degrees on weight machine with light resistance
- Forward, lateral and retro step downs (medium to large step)
- Hip weight machine x 4 bilaterally
- Proprioceptive training Single leg BAPS, ball toss and body blade
- Grid exercises
- Fitter
- Slide board
- Treadmill Walking progression program
- Elliptical trainer
- Pool therapy No swimming laps

GOAL

• Walk 2 miles at 15 min/mile pace

MONTHS 3 - 4

- Isokinetic testing at 180 and 300 degrees/sec
- Must have 80% of opposite leg to clear for straight line running
- Continue appropriate previous exercises
- No Squatting or Leg press > 90 degrees
- Hamstring curls on weight machine through full range
- Knee extension weight machine
- Short arc quads
- Functional activities Figure 8s, gentle loops, large zigzags
- Stairmaster Small steps
- Treadmill Running progression program if cleared
- Pool therapy Swimming laps

GOAL

• Run 2 miles at easy pace

MONTHS 4 - 6

- Repeat Isokinetic testing as needed
- Continue appropriate previous exercises
- Squatting and Leg press through full range as tolerated
- Agility drills / Plyometrics
- Sit-up progression
- Running progression to track
- Quad stretches
- Transition to home / gym program

GOAL

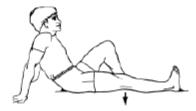
• Return to all activities

NO CONTACT SPORTS UNTIL 6 MONTHS POST-OP

KNEE POST-OP PHASE I

Perform exercises below frequently: 30 reps, 3 – 5x a day







Heel Slides



Active Assisted Motion

Ice Position 15 minutes 2-3 x per day



ADAPTED FROM:

Mark Galland, MD Physical Therapy Section Kenneth Kirby, PT, DPT William Beaumont Army Medical Center