GALLAND/KIRBY MICROFRACTURE TREATMENT OF ARTICULAR CARTILAGE DEFECTS (TIBIOFEMORAL) 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

• Crutches: Toe touch weight bearing (TTWB) x 6wks, No Brace
• CPM – Speed and ROM to patient tolerance, begin with 0-45 (8hrs daily)
• AAROM, AROM as tolerated
• Passive extension with heel on bolster or prone hangs
• Patellar mobilization (teach patient)
• Calf pumping
• Short arc quads, 0-20 only, without resistance
• Standing HS curls in parallel bars
• Straight leg raise (SLR) x 4 with knee in brace
• Electrical stimulation in full extension with quad sets and SLR
• Stationary bicycle for ROM, seat adjusted high, no resistance
• **No Resisted Closed Chain ex x 6 weeks**
• **No Resisted Open Chain ex x 6 weeks**

GOALS

• CPM or bicycle: 500 cycles or more per day the first week
• 1000 cycles or more per day thereafter
• Full extension

Weeks 2 - 4

• Crutches with TTWB x 6 weeks
• Continue appropriate previous exercises
• Scar massage when incision healed
• D/C CPM once patient is independent with stationary bicycle
• AROM, AAROM as tolerated
• Co-contractions quads / HS at 0, 30, 60, 90 degrees
• SLR x 4 on mat (no brace) – Add light weight below the knee if good quad control
• Pool therapy:
  – Deep water (chest/shoulder) walking and ROM exercises
  – Water jogging floating upright in deep water
• Stretches – Hamstring, hip flexors, ITB

**GOALS**

• No extensor lag
• No effusion

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**WEEKS 4 - 6**

• Crutches TTWB
• Continue appropriate previous exercises
• PROM, AROM, AAROM to regain full motion
• Standing SLR x 4 with Theraband (standing on uninvolved LE)

**GOAL**

• Full AROM

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**WEEKS 6 - 8**

• Weight bearing as tolerated (WBAT), D/C crutches when gait is normal
• Continue appropriate previous exercises
• Leg press with light weight
• Mini squats, Wall squats
• Hamstring curls – Carpet drags or rolling stool (closed chain)
• Treadmill – Forwards and backwards walking

**GOAL**

• Normal gait

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**WEEKS 8 - 12**

• Continue appropriate previous exercises
• HS curl weight machine
• Knee extension weight machine
• Proprioceptive training – BAPS, ball toss, body blade
• Fitter
• Slide board
• Forward, lateral and retro step downs
• Stationary bike – Minimal resistance
• Treadmill – Walking progression program
• Elliptical trainer
• Pool therapy – Waist deep water walking or slow jogging
• Quad stretches

**GOALS**
• No thigh atrophy
• Walk 2 miles at 15 min/mile pace

**MONTHS 3 - 4**
• Continue appropriate previous exercises with progressive resistance
• Treadmill – Running progression program
• Stairmaster

**GOAL**
• Run 2 miles at easy pace

**MONTHS 4 - 6**
• Continue appropriate previous exercises
• Agility drills / Plyometrics
• Sit-up progression
• Progressive weight training program
• 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

Quad Isometrics

Heel Slides

Active Assisted Motion

Ice Position  15 minutes 2-3 x per day