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Microfracture for Articular Cartilage Defects, Patellofemoral

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This is the rehabilitation plan I ask your physical therapist to follow after your Microfracture for Articular Cartilage Defects, Patellofemoral. Bring it to your first therapy visit. It is a framework, not a prescription: your therapist adjusts the pace to how you are healing, and anything we discussed in the office takes precedence over what is printed here. If something on this page does not match what we talked about, ask me.

Operation Microfracture for Articular Cartilage Defects, Patellofemoral

Physical therapist Please send progress notes to the office and call with any question about the plan.

Days 1-14

EXERCISES

- 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: weight bearing as tolerated (WBAT), D/C when gait is normal
  - Brace 0-20 degrees x 6 weeks
- 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 Hamstring 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

EXERCISES

- Brace 0-20 degrees 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 / Hamstring at 0, 30, 60, 90 degrees
- SLR x 4 on mat (no brace) - Add light weight below the knee if good quad control

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- Pool therapy - Deep water (chest/shoulder) walking and ROM exercises
  - Water jogging floating upright in deep water
- Stretches - Hamstring, hip flexors, ITB
- BAPS, ball toss, body blade
- Forward, backward, lateral walking in parallel bars
- Double leg heel raises, progress to single leg

GOALS
- No extensor lag
- No effusion

Weeks 4-6

EXERCISES
- Brace locked at 0-20 degrees
- Continue appropriate previous exercises
- PROM, AROM, AAROM to regain full motion
- Standing SLR x 4 with Theraband bilaterally

GOALS
- Full AROM

Weeks 6-8

EXERCISES
- D/C brace
- 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

GOALS
- Normal gait

Weeks 8-12

EXERCISES
- Continue appropriate previous exercises
- Hamstring curl weight machine
- Knee extension weight machine
- Proprioceptive training - BAPS, ball toss, body blade
- Fitter
- Slide board
- Forward, lateral and retro step downs

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- 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

EXERCISES
- Continue appropriate previous exercises with progressive resistance
- Treadmill - Running progression program
- Stairmaster

GOALS
- Run 2 miles at easy pace

Months 4-6

EXERCISES
- Continue appropriate previous exercises
- Agility drills / Plyometrics
- Sit-up progression
- Progressive weight training program
- Transition to home / gym program

GOALS
- Return to all activities
- Pass a return-to-sport / fitness test at 6 months post-op
- No contact sports until 6 months post-op

Home exercise sheet - knee phase 1

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

Abbreviations

AROM / AAROM / PROM: active / active-assisted / passive range of motion. ROM: range of motion. ER / IR: external / internal rotation. ABD / ADD: abduction / adduction (away from / toward the midline). FLEX / EXT: flexion / extension. WBAT / PWB / TTWB / NWB: weight bearing as tolerated / partial / toe-touch /

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non-weight bearing. SLR: straight leg raise. HS: hamstrings. ITB: iliotibial band. UE / LE: upper / lower extremity. UBE: upper body ergometer (arm bike). BAPS: balance board. BFR: blood flow restriction training. PREs: progressive resistance exercises. D/C: discontinue. prn: as needed. POD: post-operative day. TENS: transcutaneous electrical nerve stimulation. ADLs: activities of daily living.

Source

Adapted from William Beaumont Army Medical Center, Physical Therapy Section, "Microfracture_PF WB08", Revised August 2008, published by William Beaumont Army Medical Center at https://william-beaumont.tricare.mil/Health-Services/Hospital-Care-Surgery/Post-Operative-Rehabilitation-Protocols (a work of the U.S. Government in the public domain).

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