



THE STONE CLINIC

ORTHOPAEDIC SURGERY, SPORTS MEDICINE AND REHABILITATION

MICROFRACTURE OF FEMORAL CONDYLE

Post-Operative Rehabilitation Protocol

General Considerations:

- Non weight bearing status for 4 weeks post-op (resting foot on floor and driving are okay)
- Depending on the location of the articular cartilage defect and subsequent graft, patients may have active and/or passive range of motion restrictions (this will be noted on the prescription); otherwise, push for full extension equal to opposite side
- Regular manual treatment should be conducted to the patella and all incisions; no direct scar mobilization at surgical portals X 4 weeks or per MD. Once cleared pay particular attention to the anterior medial portal--to decrease the incidence of fibrosis
- Light to no resistance stationary cycling is okay at 2 weeks post-op
- Early recruitment of the vastus medialis muscle will speed recovery
- No resisted leg extension machines (isotonic or isokinetic) at any point
- Low impact activities for 3 months post-op
- *Use of the CPM for 6 hours a day for 4 weeks is imperative

Week 1:

- Nurse visit day 2 to change dressing and review home program.
- Icing and elevation for 15-20 minutes every 2 hours during wake hours.
- CPM (continuous passive motion machine) at home for 6 hours daily/at night.

Manual:-Soft tissue treatments and gentle mobilization to posterior musculature, patellofemoral joint, quadriceps, and effleurage for edema.

Exercise:-Straight leg raise exercises (lying, seated, and standing), quadricep/adduction/gluteal sets, passive and active range of motion exercises.
-Hip and foot/ankle exercises, well-leg stationary cycling, upper body conditioning.

Goals:

Decrease pain, edema.
Gait non weight bearing x 4 weeks.
Range of motion 0-100 degrees or per MD.

Weeks 2 - 4:

- Nurse visit at 14 days for suture removal and check-up.

Manual: -Continue with soft tissue mobilization, effleurage, and gentle range of motion.

Exercise: -Manual resisted (PNF patterns) of the foot, ankle and hip; core stabilization.
-Nonweightbearing aerobic exercises (i.e. unilateral cycling, UBE, Schwinn Air-Dyne arms only, well Leg cycling)
-AFTER 2 weeks, bilateral cycling with light to no resistance, slow cadence.

Goals:



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Range of motion 0-100 degrees or per MD.

Weeks 4 - 6:

-MD visit at 4 weeks post-op, will progress to full weight bearing and discontinue use of rehab brace

Manual: -Continue with soft tissue mobilization, patellar glides, range of motion. Initiate scar mobilization if incisions completely closed.

Exercise: -Incorporate functional exercises (i.e. squats, linebackers, lunges, Shuttle/leg press, calf raises, step-ups/lateral step-ups).
-Balance/proprioception exercises.
-Slow to rapid walking on treadmill (preferably a low-impact treadmill).

Goals:

Gait weight bearing as tolerated, progress from bilateral crutches->single crutch->no assistive device.
Range of motion 0 to 130 degrees.

Weeks 6 - 8:

Manual: -Continue with soft tissue mobilization, patellar glides, range of motion. Continue with scar mobilization as needed.

Exercise: -Increase the intensity of functional exercises (i.e. add stretch cord for resistance, increase weight with weightlifting machines)
-Add lateral training exercises (side-stepping, Theraband resisted side-stepping, lateral leaping onto toes as tolerated)
-Road cycling as tolerated, in saddle with no clip ins, and on flat surfaces; slow progression to incline.

Goals:

Gait without a limp.
Range of motion should be at least 90 % of normal.

Weeks 8 - 12:

-Low-impact activities until 12 weeks.
-Patients should be pursuing a home program with emphasis on sport/activity-specific training.

Weeks 12+:

-Sports Test 1 at 12 weeks. Initiate return to running program.



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-Slow progression of sport specific drills. Continue to increase strength, endurance.