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MICROFRACTURE PATELLA PROTOCOL

GENERAL GUIDELINES:

- TTWB with crutches or walker -Specified by MD
- Brace unlocked 0°-30° when adequate quadriceps control is established. Wean from brace at 6 weeks unless otherwise instructed by M.D.
- Regain full knee Extension as quickly as possible. Sleep in the brace locked at 0° until full extension is maintained.
- Patellofemoral protection restrictions with all exercises.
- Elevate the entire leg. Do not place pillows under the knee for long periods of time.
- Modalities: PRN for pain and inflammation.
- Utilize cryotherapy for 20 to 30 minutes every hour for pain and swelling reduction.

WEEKS 0-6

- LROM brace unlocked 0-30° after consulting with physician on whether the lesion is contained or uncontained
- Weight bearing progression:
 - Weeks 1-2: toe touch weight bearing with bilateral crutches
 - Weeks 2-4: partial weight bearing up to 50% with bilateral crutches
 - Weeks 4-6: weight bearing as tolerated with bilateral crutches
- Restore patellar mobility.
- Restore knee extension (low load-long duration stretching).
- Hamstring/gastrocnemius stretches.
- Ankle ROM for swelling and DVT prevention.
- PROM of knee as tolerated(Seated flexion-with assisted knee extension, assisted heel slides)
 - 0-30° weeks 1-2
 - 0-60° weeks 3-4
 - 0-90° weeks 5-6
 - ROM as tolerated week 6+
- 4-way open chain straight leg exercises.
- Weight shifts and Toe-Calf raises as weight bearing tolerates.
- Initiate HS isometrics on the ball.
- Stationary cycle when ROM allows

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- *Focus on knee remaining locked in concentric and eccentric phase. Increase reps and hold time initially, before adding resistance. No ankle weight until extensor lag is eliminated.*
- *No active knee extension exercises.*
- Modalities: PRN for pain and swelling.
- NMES for Quadriceps activation and re-education.

WEEKS 6-12

- Discontinue use of crutches by week 6-8
- Discontinue use of the LROM brace at week 6 if adequate quad control is established
- Increase ROM as tolerated
- Continue to increase hip resistance during open chain exercises as tolerated.
- Initiate mini squats
- Leg press 0-60° at week 8
- Can begin open kinetic chain knee extension without resistance 0-30° (short arc quad) at week 6; can increase to long arc quad week 8 if pain free
- May start light aquatic exercises once good Quadriceps control is established and wound is healed appropriately.
- Continue stationary cycle
- Start front and lateral step-ups
- Gait training and proprioceptive/balance exercises as weight bearing restrictions allow.
- Allowed to walk for exercise as tolerated
- May start elliptical at 12 weeks

3+Months

- Increase resistance with all exercises as tolerated.
- Increase leg strength allow for normal gait and walking longer distances.
- Forward lunges and wall squats
- Add resistance to open kinetic chain exercises
- Start balance and agility drills, sports specific drills, and plyometrics
- Initiate jogging program when instructed by MD