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Tibial Plateau Fracture Post-Operative Protocol

Phase I – Maximum Protection (0 to 1 weeks):

0 to 1 week:

- Ice and modalities to reduce pain and inflammation
- Use crutches **non-weight bearing for 6 weeks**
- **Brace for 6 weeks in full extension (may begin light knee range of motion exercises once incision is healed and cleared by Dr. Bodendorfer)**
- Elevate the knee above the heart for the first 3 to 5 days
- Initiate patella mobility drills
- Begin full passive/active knee range of motion exercises
- Quadriceps setting focusing on VMO restoration
- Multi-plane open kinetic chain straight leg raising
- Gait training with crutches (NWB)

Phase II – Progressive Stretching and Early Strengthening (Weeks 1 to 6):

Weeks 1 to 6:

- Maintain program as outlined in week 0 to 1
- Continue with modalities to control inflammation
- Initiate global lower extremity stretching program
- Begin stationary bike and pool exercise program (when incisions healed)
- Implement reintegration exercises emphasizing core stability
- Closed kinetic chain multi-plane hip strengthening on uninvolved side
- Manual lower extremity PNF patterns
- Proprioception drill emphasizing neuromuscular control
- Multi-plane ankle strengthening

Phase III – Strengthening and Proprioceptive Phase (Weeks 6 to 10):

Weeks 6 to 8:

- Modalities as needed
- Continue with Phase II exercises as indicated
- Begin partial weight bearing at 25% of body weight and increase by 25% approximately every 3 days. May progress to one crutch at 7 1/2 weeks as tolerated, gradually wean off of crutches by week 8 – 9

Weeks 9 to 10:

- Normalize gait pattern

- Advance stationary bike program; begin treadmill walking and elliptical trainer; Avoid running and impact activity
- Initiate closed kinetic chain exercises progressing bilateral to unilateral
- Initiate proprioception training

Phase IV – Advanced Strengthening and Initiation of Plyometric Drills (Weeks 10 to 20):

Weeks 10 to 16:

- Initiate gym strengthening-beginning bilateral progressing to unilateral
 - Leg press, heel raises, hamstring curls, squats, lunges, knee extensions (30° to 0° progressing to full range as PF arthrokinematics normalize)

Weeks 16 to 20:

- Continue with advanced strengthening
- Begin functional cord program
- Begin pool running program progressing to land as tolerated

Phase V – Return to Sport Functional Program (Weeks 20 to 24):

- Follow-up examination with physician
- Implement sport specific multi-directional drills and bilateral plyometric activity progressing to unilateral as tolerated
- Continue with aggressive lower extremity strengthening, cardiovascular training, and flexibility
- Sports test for return to play