Jennifer Thomson, MD
ORTHOPAEDIC SURGERY | SPORTS MEDICINE

Rehabilitation Protocol: Tibial Tubercle ORIF

Phase I:
0-1 week

- Brace: hinge knee brace, locked in extension while sleeping and at all times except when in therapy
- ROM: locked in extension
- Weightbearing: PWB in extension
- Exercises:
  - Patellar mobilization
  - Straight leg raise supine with brace locked at 0 degrees
  - Quad sets
  - Ankle pumps

Phase II:
1-6 weeks

- Brace: hinge knee brace full time. When weightbearing should be locked in extension.
- ROM: Progress as tolerated as follows-
> Weeks 1-2: 0-30 deg
> Weeks 2-3: 0-60 deg
> Weeks 3-4: 0-90 deg
> Weeks 4-6: advance as tolerated
- Weightbearing: PWB in extension
- Exercises:
  - Patellar mobilization
  - Straight leg raise supine with brace locked at 0 degrees
  - Quad sets
  - Ankle pumps

Phase III:
6-12 weeks

- Brace: unlock brace for ambulating weeks 6-8, then wean from brace as tolerated
- ROM: gradually normalize ROM, no limits, focus on maintaining full extension
- Weightbearing: full WBAT, may d/c from crutches when gait normalized
- Exercises:
  - Heel slides
  - AROM knee extension
  - Prone hangs
  - Terminal knee extensions
  - Side laying hip abduction
  - Begin short crank ergometry and progress to standard (170mm) ergometry (if knee ROM >115 deg)
  - Advance quad strengthening (closed chain)
  - Mini squats/weight shift

Phase IV:
3-6+ months

- Brace: None
- ROM: full, normal ROM
- Weightbearing: WBAT
- Exercises:
  - Leg press, squats

Phone: 201-639-6620

JT
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- Initiate jogging/running
- Isotonic knee extensions (90-40 degrees, closed chain preferred)
- Agility exercises (sport cord)
- Versaclimber/Nordic track
- Normalize quad strength
- Modalities PRN
- Sport-specific exercises

- Return to sport-- MD directed

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