OrthoIllinois REHABILITATION

Patellar Tendon Realignment

Proximal and/or Distal

Precautions:

- For 6 weeks, NO closed-kinetic chain exercises
- Protocol is the same for proximal and distal, EXCEPT WB and other limitations as noted below
- Use distal protocol after a combined proximal and distal realignment

Phase I (1 – 5 days post-op)

- Wound care: Observe for signs of infection
- Modalities: prn for pain and inflammation (ice, IFC)
- Brace:
    - Locked in full extension for all activities except therapeutic exercises and CPM use
    - Locked in full extension for sleeping
- Gait:
    - Proximal realignment:
        - WBAT with 2 crutches
    - Distal realignment:
        - 50% WB with 2 crutches
- ROM:
    - Knee: 0 – 30 degrees
    - Ankle AROM

Phase II (5 days – 4 weeks post-op)

- Wound care: Monitor site for signs of infection and initiate scar management techniques when incision is closed
- Modalities: prn for pain and inflammation (ice, IFC)
- Brace:
    - Weeks 0 – 4: Locked in full extension for all activities except therapeutic exercises and CPM use
    - Locked in full extension for sleeping
- Gait:
    - Proximal realignment:
        - WBAT with 2 crutches
    - Distal realignment:
        - 50% WB with 2 crutches

- ROM:
  - 0 – 2 weeks: 0 – 30 degrees
  - 2 – 4 weeks: 0 – 60 degrees
  - By week 6, full knee extension
  - Avoid open chain active extension
- Strengthening:
  - Quad sets for isometric adduction with biofeedback and e-stim for VMO (no e-stim for 6 weeks for proximal realignment).
    - By end of 6 weeks, goal of regaining active quad and VMO control
  - Heel slides
    - Proximal realignment: 0 – 60 degrees
    - Distal realignment: 0 – 90 degrees
  - CPM for 2 hours, 2x/day
    - Proximal realignment: 0 – 60 degrees
    - Distal realignment: 0 – 90 degrees
  - NWB gastroc, soleus, and hamstring stretches
  - 4-way SLR (lying down and standing) with brace locked in full extension
  - Resisted ankle ROM with theraband
  - Patellar mobilization (begin as tolerated)
  - At 3 – 4 weeks, Begin aquatic therapy, with emphasis on gait

Phase III (4 weeks – 10 weeks post-op)

- Wound care: Observe for signs of infection, continue scar mobs
- Modalities: Continue prn for pain and inflammation (ice, IFC)
- Brace:
  - 4 – 6 weeks: Unlocked for sleeping, locked in full extension for ambulation
  - 6 – 8 weeks: D/C for sleeping, unlock for ambulation as allowed by physician
  - 8 – 10 weeks: D/C
- Gait:
  - 4 – 6 weeks:
    - Proximal realignment: WBAT with 2 crutches
    - Distal realignment: 50% WB with 2 crutches
  - 6 – 8 weeks: WBAT with 2 crutches
  - 8 – 10 weeks: D/C crutches if no extension lag is present, patient is able to achieve full extension, and gait pattern is normalized with one crutch
- ROM:
  - 4 – 6 weeks: 0 – 90 degrees
  - 6 – 8 weeks: Increase flexion gradually to normal range for patient

- Strengthening:
    - 4 – 6 weeks: continue as in phase II
    - 6 – 8 weeks:
        - May begin NMES for proximal realignment
        - Continue exercises progressing to full flexion with heel slides
        - Progress to WB gastroc and soleus stretching
        - D/C CPM if achieved 90 degrees of knee flexion
        - Continue aquatic therapy
        - Closed-chain balance exercises
        - Stationary bike- low resistance, high seat
        - Wall slides progressing to mini-squats, 0 – 45 degrees of flexion
        - Step-ups with good quad control and no pain (staring with 2-inch step)
    - 8 – 10 weeks:
        - Should be able to demonstrate SLR without extension lag
        - Moderate resistance for stationary bike
        - 4-way resisted hip strengthening
        - Leg press 0 – 45 degrees
        - Swimming and/or stairmaster for endurance
        - Toe raises, hamstring curls, and proprioceptive exercises
        - Treadmill walking
        - Flexibility exercises continued

Phase IV (10+ weeks post-op)

- Criteria:
    - Clearance from physician to begin more concentrated closed-kinetic chain exercises and resume full or partial activity level
    - At least 0 – 115 degrees AROM with no swelling and no complete voluntary contraction of quad
    - No evidence of patellar instability
    - No soft tissue complaints
- Strengthening:
    - Progression of closed-kinetic chain activities including partial squats (60 degrees), leg press, forward and lateral lunges, lateral step-ups, leg extensions (60 – 0 degrees), bicycle, and/or stepper
    - Functional progression, sport-specific activities
- Testing: Performance to <25% deficit compared to non-surgical side by D/C

Adapted From:

1) Brotzman SB, Wilk KE. Clinical Orthopedic Rehabilitation. 2nd Ed. Philadelphia: Mosby; 2003.
2) Wilk KE, Reinold MM, Andrews, JR. Rehabilitation Following Lateral Retinacular Release and Medial Retinacular Thermal Shrinkage/Plication. Winchester, MA: Advanced Continuing Education Institute, 2004