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Achilles Tendon Repair Post-Operative Care

This protocol was developed to provide the physical therapist with guidelines for treatment of a patient who has undergone Achilles tendon repair. These guidelines are not a substitute for appropriate clinical decision making. It is essential that the therapist take into consideration the patient's general health, integrity of associated joints and any post-op complications. The protocol is divided into 4 phases. Patients will typically continue with formal physical therapy in some capacity until they are in Phase III (16 to 18 weeks post-op). Anticipated number of visits range from 10 to 16 formal PT sessions. Progression from phases should not occur prior to the appropriate post-op timeframes; however, phase progression should be delayed if the patient does not meet the progression criteria. Tolerance to exercise should be closely monitored. Patients should not have a significant increase in pain after treatment or exercise. If this occurs, treatment is too vigorous and should be modified accordingly.

Phase I: Immediate Protection Phase
Weeks 0 to 8

Immobilization:
- In boot or cast, non-weight bearing with bilateral crutches for 8 weeks

Formal Physical Therapy:
- Surgeon will determine start date of PT at patient's first follow-up
- Patients typically start PT in late Phase I or early Phase II

Goals:
- Protect healing tissue
- Decrease pain, swelling, and inflammation
- Minimize muscular atrophy
- Control weight bearing forces

Precautions:
- No PROM for 8 weeks
- No strengthening exercises for 2 weeks,
  - Begin sub-max isometrics at week 2
- Avoid passive gastroc/soleus stretching
- Avoid prolonged periods in dependent position
  - Elevate periodically (3-5 times a day)
- Monitor wound healing closely

Physical Therapy Treatment:

- No ankle strengthening for 2 weeks
  - Begin sub-max ankle isometrics at week 2
- Hip abduction/adduction
- SLR flexion
- Quad sets, ham sets
- Bicycle (in boot)
- Gait training as necessary with bilateral axillary crutches

Recommended HEP:

- Keep leg elevated above heart to reduce swelling as needed (3-5 times a day)
- Quad sets/ham sets
- SLR program

Criteria for Progression to Phase II:

- Minimal/no pain and edema
- Satisfactory clinical exam

Phase II: Intermediate Phase
Weeks 8 to 12

Formal Physical Therapy:

- The majority of patients will be treated 2 times per week

Goals:

- Protect tissue healing
- Minimize muscular atrophy
- Progress weight bearing tolerance
- Begin light proprioceptive drills

Precautions:

- Weight-bearing should be through the heel and not the toes
- Avoid activities that cause pain at the surgical site

Physical Therapy Treatment:

- Continue with Phase I exercises as appropriate
- PROM as tolerated (pain free)
  - Dorsiflexion, plantarflexion, inversion, eversion
    - Progress from flexed-knee to extended-knee as tolerated
- Weight shifting
  - Surgeon will determine when to discontinue boot
  - Begin PWB as tolerated with bilateral crutches. Gradually progress to FWB (week 12)
    - Week 8-9: 25% WB
    - Week 9-10: 50% WB
    - Week 10-11: 75% WB
    - Week 11-12: FWB
- Gait training
- Ankle inversion/eversion AROM
- Seated BAPS board
- Towel gathering
- Initiate light proprioception drills once >50% WB

Recommended HEP:

- Keep leg elevated above heart to reduce swelling as needed
- Phase I and II exercises as appropriate

Criteria for Progression to Phase III:

- Minimal/no pain and edema
- Satisfactory clinical exam

Phase III: Advanced Motion and Strengthening Phase
Weeks 12 to 22

Formal Physical Therapy:

- Most patients will continue with formal PT 2 times a week with anticipated discharge at 16-18 weeks post-op

Goals:

- Progress to full AROM
- Advance proprioceptive drills
- Increase strength, power, and endurance

Precautions:

- Avoid activities that cause pain at the surgical site

Physical Therapy Treatment:

- Continue with Phase I and II exercises/treatment as appropriate

Weeks 12 to 14

- 4-way Theraband
  - Dorsiflexion, plantarflexion, inversion, eversion
- Leg press
- Knee extension
- Squats (0-35°)
- Hip strengthening
- Retro ambulation (for eccentric plantarflexion control)

Weeks 14 to 16

- Squats (0-60°)
- Forward and lateral lunges
- Step ups
- Step downs
- Light, standing heel/toe raises (with gradual progression to eccentric and unilateral)

Weeks 16 to 18

- Standing proprioceptive drills (progress to perturbations)
- Stair climber
- Initiate plyometric program (if appropriate)

Weeks 18 to 20

- Initiate running program (if appropriate)
- Initiate agility drills (if appropriate)

Weeks 20 to 22

- Initiate sport-specific training and drills (if appropriate)

Recommended HEP:

- Phase I, II, and III exercises as appropriate

Criteria for Progression to Phase IV:

- Minimal/no pain with sport and recreational movements
- Independent, reciprocal stair negotiation
- Normal gait pattern
- Satisfactory clinical exam

Phase IV: Return to Activity Phase
Week 22 onward

Formal Physical Therapy:

- Most patients will be discharged in late Phase III
- General guidelines of discharge are as follows:
  - Non-antalgic, independent gait
  - Independent, reciprocal stair negotiation
  - Pain-free AROM
  - Normal age-appropriate balance and proprioception
  - Independent with HEP
  - Achievement of patient-specific goals

Goals:

- Continue to increase strength, power, and endurance of lower extremity
- Gradual return to sport activities

Home Exercise Program:

- Continue strengthening program
- Continue CKC strengthening program
- Continue plyometric program
- Continue running and agility program
- Accelerate sport-specific training and drills

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