BRIDLE TENDON TRANSFER REHAB PROTOCOL
NICHOLAS L. STRASSER, MD

POSTERIOR TIBIAL TENDON BRIDLE TRANSFER
POSTOPERATIVE PHYSICAL THERAPY PROTOCOL

Diagnosis: Foot drop status post posterior tibial tendon Bridle transfer
Frequency: 2 to 3 times per week unless otherwise specified

PHASE 1: PROTECTION AND IMMOBILIZATION (0 to 6 weeks)

Goals: Protect tendon transfer, prevent elongation, control swelling

- Immobilization in splint or cast with foot in neutral to slight dorsiflexion
- Non-weight bearing with crutches or scooter
- Elevation to control swelling
- No ankle range of motion
- Encourage toe range of motion
- Maintain knee and hip motion

Precautions:

- Avoid any active ankle motion
- Avoid plantarflexion and inversion

PHASE 2: PROTECTED MOBILIZATION (6 to 10 weeks)

Goals: Initiate controlled motion and gradual weight bearing

- Transition to CAM boot
- Progress weight bearing as tolerated over 2 to 4 weeks
- Begin passive and active-assisted ankle range of motion
- Emphasize dorsiflexion
- Avoid aggressive plantarflexion stretching
- Initiate gentle isometric activation without resistance
- Begin scar mobilization when incision healed

Precautions:

- Avoid resisted strengthening
- Avoid inversion and plantarflexion bias

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PHASE 3: MOTOR RE-EDUCATION AND EARLY STRENGTHENING (10 to 16 weeks)

Goals: Retrain tendon function as a dorsiflexor, normalize gait

- Transition from boot to ankle brace
- Full weight bearing in brace
- Begin active dorsiflexion exercises
- Use visual and tactile cueing to promote correct muscle activation
- Initiate light resisted dorsiflexion with bands
- Consider neuromuscular electrical stimulation to assist activation
- Begin gait training with focus on heel strike and foot clearance
- Initiate balance and proprioception exercises

Precautions:

- Avoid compensation with inversion or plantarflexion
- Focus on controlled, isolated dorsiflexion

PHASE 4: PROGRESSIVE STRENGTHENING AND FUNCTION (4 to 6 months)

Goals: Improve strength, endurance, and functional mobility

- Progress resisted dorsiflexion and eversion strengthening
- Initiate closed-chain strengthening exercises
- Advance balance training to single limb activities
- Begin low-impact cardiovascular activity
- Continue gait training to normalize mechanics
- Initiate calf strengthening

PHASE 5: RETURN TO ACTIVITY (6 to 9 months)

Goals: Return to higher level activity and sport as appropriate

- Progress to jogging and running as tolerated
- Initiate agility and sport-specific training
- Gradual return to full activity based on strength and function
- Wean brace as tolerated

ADDITIONAL CONSIDERATIONS

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- Emphasize neuromuscular retraining throughout rehabilitation
- Focus on converting posterior tibial tendon function to dorsiflexion
- Avoid reinforcing preoperative motor patterns
- Functional recovery may lag behind structural healing

FOLLOW UP

- Routine follow up as scheduled
- Adjust therapy progression based on clinical exam and patient progress