Ankle Fusion, Tibiotalocalcaneal (TTC) Fusion and Pantalar Fusion

Phase 1 - Early Protective Phase (0-10 weeks)

Goals for phase 1

- Minimize effusion
- ROM at home starting at weeks 6-8, instructed by MD
- Follow weight bearing schedule to ensure healing and minimize inflammation

Criteria for progression to Phase 2

- Clearance from Physician to start Physical Therapy

Brace

- 0-2 weeks: NWB in a splint
- 2-6 weeks: NWB in a cast
- 6-10 weeks: Wean into WBAT in a CAM boot
- 10-14 weeks: Wean into WBAT in a lace up non articulating ASO brace

PROM

- 6-8 weeks - instructed by MD office (plantar flexion and dorsiflexion)

Other considerations

- Fusion Position:
  0-5 degrees valgus, neutral
  DF/PF, 10-15 degrees abduction (for all 3 procedures)
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Phase 2 – Intermediate Phase (10-14 Weeks)

Goals for phase 2
- Start Outpatient PT at 10-12 weeks post-op
- (PT to last 6-8 weeks total)
- WBAT out of boot and into shoe with ASO brace without compensation
- Minimize effusion
- Increase core, hip and knee strength

Criteria for progression to Phase 3
- Minimal pain with ambulation
- Minimal effusion
- Ambulate WBAT in ASO

Brace
- 10-12 weeks wean from boot into normal shoe with ASO brace on during all weight bearing activities per MD recommendation, including PT

Weight bearing
- WBAT weaning from boot and into ASO brace to gradually increase time and distance without compensation

PROM
- All planes to comfort

AROM
- Ankle Fusion: DF and PF AROM about 30% of normal; foot ABD and ADD about 90% of normal
- Tibiotalocalcaneal (TTC) Fusion: will have talonavicular ROM which will improve over time, so expect about 90% loss of DF and PF AROM
- Pantalar Fusion: will have minimal ROM anywhere, although some will increase through the NC and TMT joints

Manual Therapy
- Scar tissue mobility
- Grade 1, 2 joint mobilizations to unfused joints

Strengthening
- Progressive hip, ankle and core strengthening
- Ankle strengthening: start isometric and work up to gentle isotonics
- Foot intrinsic strengthening

Proprioception
- Low level balance and proprioceptive exercises starting with double leg and on a stable surface

Aquatics
- Initiate aquatic therapy program when incisions are closed
- Modalities Heat for stiffness as needed
- Cryotherapy after activity
- Other modalities as needed for pain and swelling
Phase 3 – Intermediate Phase (14-16 Weeks)

Goals for phase 3
- Full weight bearing without compensation
- Wean from ASO brace at 14-16 weeks under PT guidance
- ASO brace used for patient comfort only after weaning period is complete. Patient may choose to wear for "high risk" activity
- Ambulation without a walking aid, without compensation

Brace
- Wean from ASO brace at 14-16 weeks
- ASO brace used for patient comfort or during "high risk" activity
- May require a rocker bottom shoe at this point (optional)

PROM/AROM
- LE flexibility restored

Manual Therapy
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Strengthening
- Continue with progressing LE and core strength to tolerance

Proprioception
- Continue progression:
  - Stable surface decreasing UE support and progression to single leg balance
  - Progression to unstable surfaces, perturbations and or dual tasking

Core Strengthening
- As tolerates
  - Modalities
    - Heat for stiffness as needed
    - Cryotherapy after activity
    - Other modalities as needed for pain and swelling

Cardiovascular
- Stationary bike
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Criteria for progression to Phase 4
- Ambulation without brace and no compensation
Goals for phase 4
- Progress single leg muscle strength, endurance and balance
- Sport or work specific tasks, non-impact
- Full strength

Criteria for return to work, function, sport
- Week 20-24: Return to function testing if required by MD
- Pain-free, full ROM, minimal joint effusion, 5/5 MMT strength, jump/hop testing at 75% compared to uninvolved, adequate ankle control with sport and/or work specific tasks

Brace
- Patient may continue to wear ASO for "high risk" activity

Strengthening
- Unilateral gym strengthening program
  - single leg calf raises
  - single leg squats
  - eccentric leg press
  - step-up progression
  - multi-directional lunges

Proprioception
- Advanced proprioception
  - un-stable surfaces with perturbations
  - dual tasking
  - sport specific balance tasks as able

Core Strengthening
- Advance core strengthening

Cardiovascular
- Upright bike
- Elliptical
References:


This protocol was updated and reviewed by Dr. Devries and Dr. Scharer of BayCare Foot & Ankle Center and Stacy Eck PT on 11/05/15.