TAR Rehab Protocol

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Surgical and background details

These guidelines are intended to guide physiotherapy management following total ankle replacement(TAR).

Total Ankle Replacements are uncemented and have to withstand similar forces to hip and knee replacements without the benefit of stem fixation or large components. It is necessary for TAR's to undergo a protected period to allow for early bone fixation before weight-bearing can commence. Usually this is for 6 weeks post-operatively.

Day 1 Post-op

It is routine for the patient to be placed in a backslab in theatre.

The physiotherapist is required to ensure the patient is safe and capable of transferring and mobilising NWB on the operated foot.

A knee scooter can be used.

There is a one week wound follow-up.

Weeks1 and 2

The focus of these weeks is wound healing which can be problematic in TAR.

The patient is often placed in a backslab in theatre and remains Non Weight Bearing.

They are reviewed in the clinic at One Week and the backslab is removed with inspection of the wound to ensure healing is progressing as required.

They are then placed in a long cam boot which is worn 24/7 and the patient is to remain NWB.

Week 2 Review

Sutures are removed and the wound is checked.

The patient remains NWB but can come out of the boot for :

1. Active ROM exercises into dorsiflexion and plantarflexion.
2. Theraband ankle plantarflexion against red theraband
3. NWB gait is continued

All exercises are active - there is to be **NO passive manipulation** of the ankle by the Physiotherapist.

Swelling Control

Patient education around managing swelling including :- tubigrip; icing; minimizing the time the operated limb is dependent is provided.

Swelling control is an important component of wound management.

Weeks 3-6

NWB gait is continued although a progression of the aides the joint recipient is using may be necessary (eg off knee walker and onto crutches which makes the transition to WBAT gait at 6 weeks easier).

1. Active ROM and theraband plantarflexion exercises are continued. There is **NO manipulation of the ankle by therapist.**
2. Continue theraband ankle plantarflexion exercises
3. Isometric foot intrinsic (toe gripping) exercises can be commenced in the boot.

Week 6

The patient is reviewed clinically and with X-rays.

If cleared at Xray the patient commences WEIGHT BEARING AS TOLERATED IN THE BOOT.

1. Continued active ankle ROM exercises out of the boot.
2. Theraband resistance to ankle plantarflexion can increase to green and black theraband. Red theraband resisted ankle dorsiflexion can be recommenced.

No passive ankle manipulation is undertaken. Pursuing a plantargrade range of ankle dorsiflexion with non-weight bearing belt stretches and seated small block stretches is encouraged. Self-calf and Achilles' massage or massage with the calf lying on a tennis ball in long sitting can be helpful in regaining ankle dorsiflexion.

The emphasis to manage swelling remains a priority as the patient spends more time with the limb dependent. Continue with tubigrip, ice, sitting with the operated leg up.

Week 10

Patient can mobilise indoors at home without the boot. They may require the use of a crutch at this phase. The use of one crutch in the opposite hand is considered to be preferential to weight-bearing with a significant limp.

Maintenance of the boot to mobilise outside the home remains in place.

Patient can sleep without the boot on if they prefer.

Continue theraband ankle dorsiflexion, plantarflexion and intrinsic muscles of the foot strengthening exercises. Seated belt dorsiflexion stretches and seated small block dorsiflexion stretches can continue. These are low load stretches. Calf and Achilles' massage and a sustained low load stretches is what is required.

Seated heel raises. Bed based bridging; hands on table small range squats can be commenced.

No passive manipulation of the ankle.

Week 12

Patient is reviewed in the clinic with X-rays.

Weaning from the boot to full weight-bearing continues.

Resistance and conditioning exercises can be commenced- particularly stationary bike exercises for general conditioning and calf strengthening.

Some examples of calf strengthening could include low load leg press if access to this equipment is available. Alternatively elbows on table double to single leg heel raising could be incorporated. Resumption of theraband eversion and inversion exercises, for the mid foot, should commence. Intrinsic foot muscle exercises, carried out in weight-bearing should be pursued.

The muscles of the operated leg will be deconditioned from the ankle disability pre-operatively as well as the non-weightbearing post-op phase. Weightbearing strengthening exercises and weight-bearing in general should be upgraded in a graded manner in consideration of this to minimize tendinopathies and plantar foot pain as weightbearing resumes.

Pursuing an ankle dorsiflexion range of motion may be necessary. Cautious manual therapy can commence at this phase with the goal of a plantargrade ankle being pursued.

The manual therapy recommended is calf, Achilles' and ankle massage. Post-massage small block dorsiflexion stretching (seated or standing with hands on a bench) can be carried out and should be continued at home. Knee to wall or double leg mini squats are also recommended.

Exercises to optimise ankle dorsiflexion remain low load, meaning that with the block stretches and the knee to wall most of the body weight is kept on the non-operated leg.

Unaided gait should be achieved at this time with single leg standing balance exercises as well as gait reeducation drills being incorporated.