Table I. Management of patients during immobilisation period for operative and non-operative patients

Week	Conservative	Surgical
0 to 2	Equinus FWB cast with a wedge in the best position that opposes the tendon ends	Back slab NWB
2 to 5	Vacoped boot locked at 30 degrees FWB	Vacoped boot locked at 30° FWB
5 to 7	Vacoped boot 30° to 15° FWB	Vacoped boot 30° to 15° degrees
	Yellow theraband exercises for soleus and gastrocnemius	Yellow theraband exercises for soleus and gastrocnemius
7 to 9	Vacoped boot 0-30 degrees with a flat wedge FWB	Vacoped boot 0-30 degrees with a flat wedge FWB
9 to 10	Vacoped boot fully unlocked FWB	Vacoped boot fully unlocked FWB
10 to 16	Removal of boot	Removal of boot
	To wear only in vulnerable environments (6/52)	To wear only in vulnerable environments (6/52)

FWB, Full Weight Bearing, NWB, non weight bearing

Table II. Rehabilitation guidelines after immobilisation for operative and non operative patients)

Do	Do not
Weeks 10 to 12 post injury	
Issue patient with a heel raise for shoe	
Warn the patient that most re-ruptures occurs during this phase	
Advise the patient to avoid activities which involve extreme dorsi flexion of the ankle combined with active plantar flexion	
Advise the patient that they will not return to sports which involve running until they are 6 to 8 months post injury	
Advise the patient on a PWB gait pattern; particularly re-educating the toe off phase of gait	Do NOT attempt running, jumping or hopping
Work on ROM of the ankle and foot. Particularly length of soleus and gastrocnemius	
Lower limb muscle strength work. Particularly of the plantar flexors	Do NOT attempt eccentric lowering exercise off a step used for tendonopathies. Do not attempt resistance plantar flexion exercises which requires more than half the patients body weight
Proprioception exercises	
Gentle plyometric exercises	
Hydrotherapy – particularly good during this phase	
For surgical patients take care of the scar. Any sign of break down refer patient back to clinic as soon as possible	
3 to 5 months post injury	
Dispense of heel raise	
Continue to avoid activities of extreme dorsi flexion combined with active plantar flexion	
Aim to single leg heel raise	
Plyometric – progress for example start with 2 feet jumps (bunny hops), jogging on trampet, PWB jogging, i.e., leaning on table	
5 to 6 months post injury	
Gait – Start jogging on the flat	
Strength – start eccentric exercises off step	
Progress proprioceptive exercises as appropriate	
Sports specific rehab exercises	
6 to 8 months post injury	
Gait – introduce hill running	Return the patient to competitive sports until they can: single leg heel raise; sprint with the toe off phase of gait; until horizontal single leg hop × 3 is at least 75% of good leg and vertical hop is at least 75% of good leg
Introduce hopping and progress to long horizontal and vertical hops	
Return to sport as able	

ROM, range of movement

were also considered. All patients with comorbidities considered as contra-indications to surgery were treated conservatively. Open injuries were always treated surgically. Non-operative management was selected for all other cases, including elite athletes (national representation, semi-professional and professional sports personnel).

The position of immobilisation was determined from the ultrasound scan. Patients in whom the gap was obliterated in full plantar flexion were placed in a below-knee weight-bearing cast in maximum equinus. This cast was retained for two weeks, after which a walking orthosis that enabled a gradual reduction in equinus was used.