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Broström-Gould Ankle Lateral Ligament Reconstruction: Accelerated Rehabilitation Protocol

Operative Summary

Following ankle arthroscopy, the Anterior Talo-Fibula Ligament (ATFL) and/or Calcaneo-Fibula Ligament (CFL) are reconstructed by tightening the tissue by detaching, advancing and reattaching them with bone anchors or sutures.

Day of Operation (week 1)

Rigid walking boot placed during surgery
Mobilise touch weight bearing (10 % body weight) with 2 crutches
Home the same
Strict elevation at the level of the chest
Move toes, knee and hip

Weeks 1 – 2 Post Operatively

Week 1 : Strict elevation at the level of the chest, for 23 hours a day (for pain relief and wound healing)
Week 2 : Strict elevation at the level of the chest 40 minutes every hour
Mobilise touch weight bearing (10 % body weight) with 2 crutches
Move toes, knee and hip. Straight leg raises

Week 3 Post Operatively (after 2 weeks completed)

Clinic review by Mr Gordon - removal of boot, wound inspection, removal of sutures
Rigid walking boot refitted. Now full weight bearing (FWB, 100 % body weight)
Start physiotherapy

Rigid walking boot adjustments

Boot can be removed for hygiene, but no weight through leg and no inversion or eversion
Weeks 3-4: 10 dorsiflexion to 20 plantar flexion, FWB
Weeks 5-6: 20 dorsiflexion to 40 plantar flexion, FWB
Weeks 7 onward: Wean out of rigid walking boot and into an ankle brace eg Aircast A60 (see below) for 6 further weeks
Physiotherapy: Active range of motion training in brace

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Physiotherapy

Weeks 3-4

Active range of motion out of boot - 10 dorsiflexion and 20 plantar flexion

Avoiding inversion/eversion

Weeks 5-6

Active range of motion out of boot - 20 dorsiflexion and 40 plantar flexion

Avoiding inversion/eversion

Weeks 7 onward:

Wean out of rigid walking boot, FWB

Week 7 – 11 : Stage 2

Goals:

Achieve full range of movement

Eversion strength grade 4 or 5

Restrictions:

No balance exercises until eversion grade 4 or 5

No impact exercise

Exercises:

Resisted inversion and eversion exercises with progression

Encourage isolation of evertors without overuse of other muscles

Core stability work

Exercises to teach patient to find and maintain sub-talar neutral

Balance / proprioception

Stretches of tight structures as appropriate (e.g. Achilles Tendon)

Review lower limb biomechanics

Manual Therapy:

Scar massage with oil/aqueous cream

Soft tissue techniques as appropriate

Joint mobilisations as appropriate particularly sub-talar joint

Monitor sensation, swelling, colour, temperature

Hydrotherapy if appropriate

Pacing advice as appropriate

Milestones to progress to next phase:

Muscle strength: eversion grade 4 or 5 on Oxford scale

Full range of movement

Mobilising out of aircast boot

Neutral foot position when weight bearing / mobilising

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Week 12 – 6 months : Stage 3

Exercises:

Range of movement

Progress strengthening of evertors

Core stability work

Balance / proprioception work i.e. use of wobble boards, trampet, gym ball, Dyna-cushion.

Stretches of tight structures as appropriate (e.g. Achilles Tendon), not of transfer.

Review lower limb biomechanics. Address issues as appropriate.

Sports specific rehabilitation

Week 12 – 6 months : Stage 3 continued

Manual Therapy:

Soft tissue techniques as appropriate

Joint mobilisations as appropriate ensuring awareness of those which may be fused and therefore not appropriate to mobilise

Monitor sensation, swelling, colour, temperature, etc

Orthotics if required via surgical team

Hydrotherapy if appropriate

Pacing advice as appropriate

Milestones to progress to next phase:

Independently mobile unaided

Muscle strength: eversion grade 5 on Oxford scale

Returned to low-impact activity/sports

6 months – 1 year : Stage 4

Goals:

Return to high impact sports

Normal evertor activity

Single leg stand 10 seconds, eyes open and closed

Multiple heel raise

Establish long term maintenance programme

Treatment:

Progression of mobility and function

Increasing dynamic control with specific training to functional goals

Gait re-education

Exercises:

Sports specific/functional exercises

Pacing advice

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Milestones for discharge:

Independently mobile unaided

Good proprioceptive control on single leg stand on operated limb

Return to normal functional level

Return to sports if set as patient goal

Grade 5 eversion power

Summary

Week 7: Start proprioception and strength

Week 8: Start plyometrics

Week 12: Start straight running and functional activities (provided peroneal strength and proprioception normal)

Week 16: Cutting and sport-specific drills



Aircast A60 Ankle brace



Vacoped Rigid Walking Boot

Reference List

1. **Karlsson J, Rudholm O, Bergsten T, Faxen E, Styf J** Early range of motion training after ligament reconstruction of the ankle joint. *Knee Surg Sports Traumatol Arthrosc* 1995;3:173-7.
2. **Karlsson J, Eriksson BI, Sward L** Early functional treatment for acute ligament injuries of the ankle joint. *Scand J Med Sci Sports* 1996;6:341-5.
3. **Karlsson J, Lundin O, Lind K, Styf J** Early mobilization versus immobilization after ankle ligament stabilization. *Scand J Med Sci Sports* 1999;9:299-303.
4. **Li X, Killie H, Guerrero P, Busconi BD** Anatomical reconstruction for chronic lateral ankle instability in the high-demand athlete: functional outcomes after the modified Brostrom repair using suture anchors. *Am J Sports Med* 2009;37:488-94.