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ACL Reconstruction with Achilles Tendon Allograft Rehabilitation Protocol

Stage 1

Time: 0-2 days – Brace on with knee locked at 0 degrees.

Gait: Weight bearing to tolerance unless otherwise directed by physician.

Exercises:

- quad sets
- leg raises with the knee locked (full extension)
- hamstring sets (gentle)
- ankle pumps

Goal of stage one: Promote hemostasis, pain management, and regain good motor control of involved.

Stage 2

Time: 2 days – 3 weeks. ROM is started, if functional bracing is used then open brace to 60 degrees at day 2 and progressively open the brace as tolerated without increased swelling or pain. Wear brace at all times.

Gait: Partial weight bearing, increasing to full weight bearing as tolerated by the patient. The goal is to be full weight bearing by 14 days post-op. Progress to weight bearing with one crutch prior to ambulating without the crutches. Patient may ambulate without crutches when they can walk with a minimal to no limp.

Exercises:

- Active quad sets
- Passive and active knee extension to 0 degrees (no external resistance).
- Active knee flexion only
- Resisted hip extension, abduction, and adduction exercises
- Hamstring, calf, and iliotibial band stretches as indicated
- Patellar mobilization
- Closed chain activities
 - Standing terminal extension with theraband
 - Ball squeezes (hip adduction and knee extension)
 - Long sitting leg press
- May begin bicycling with high seat - low resistance for ROM only

Start electrical stimulation for muscle reeducation at 3 days post-op if quad tone is poor.

Goal: Ambulate with assistive devices, knee ROM 0-120, good isolated quad contraction.

Stage 3

Time: 3-6 weeks

Gait: Full weight bearing without crutches as soon as they can ambulate with a minimal limp.

Exercises:

Continue with exercises

Start step ups, both forward and lateral, beginning with a 2" step increasing to 8"

May start hip sled, leg press

BAPS board/KAT

Continue with closed chain activities

May start hamstring PRE if no hamstring or pes anserinus pain

Continue with bicycling, but begin cross training activities such as Nordic track, stair stepper, and EFX.

If stork stance can be held for longer than 20 seconds, begin proprioceptive activities on a mini trampoline

May begin aquatic exercises including walking/coordination activities.

Goals: By 6-8 weeks

Full ROM including hyperextension equal to uninjured extremity

Good eccentric quad control off 6" step

Ascend or descend stairs without pain or compensation

Once the patient has met all previous goals and can perform

Squat and touch

Ice skater (stick and hold)

½ single leg squat

Then the patient will start a functional ACL program.

Functional ACL 8-12 weeks

Proprioceptive exercises

Bilateral progressing to unilateral

Squat and touch

Agility ladder

1", 2", 2" lateral, ali shuffle, slalom, 2" slalom

Dot drill

hopscotch, forward and backward

Ice skater

Hold for a count of two

Strength

Single leg squat

Pitcher squat

Leg circuit I

squats

lunges

low step ups

squat jump (depending on strength)

Leg circuit II

squats or stagger squats

360 lunges

high step up

ice skater

progress to external wt as needed

progress to eccentric lunges

movement drills

serpentine

wheel drill

extended wheel drill

5-10-5 drills

zig zag drill

Goals:

Run without compensation or pain

To land a jump on both feet without compensation

70 to 80% quad strength as compared to uninvolved side

Complete to let circuits

Perform movement drills without noticeable difference right to left