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ACL Reconstruction with Patellar Tendon Autograft

Pre-op Education: Instruct the patient in ankle pumps, quad sets, seated knee flexion, supine SLR, hamstring stretches, gait training with crutches and protection of the graft.

Post-op Program:

POD 1

1. Ankle pumps – 20-25 per hour
2. Active flexion as tolerated
3. Gait with crutches and brace locked in full extension. (**WBAT**)
4. Patellar mobilizations
5. Polar care/ cryotherapy
6. Dressing change
7. Sleep with brace locked in full extension
8. Quad sets

POW 1-4

1. Continue as above
2. Start SLR's: start standing, then sitting, then supine
3. May use e-stim to promote quad recruitment
4. Progress active flexion and encourage full extension
5. Begin passive ROM to 90
6. With good quad control, may ween from brace. Usually in 2 -3 weeks.
7. Teach gait training, emphasizing heel-toe, good quad isolation, normal knee flexion and push-off.
8. Start the following open chain exercises
 - a. Sidelying hip abduction and adduction
 - b. Sitting hip flexion
 - c. Ankle theraband

- d. Standing hamstring curls to tolerance
- 9. Begin closed chain knee exercises: ENCOURAGE PROPER TECHNIQUE AT ALL TIMES.
 - a. Single leg stance: level to unlevel surfaces
 - b. Therakicks: progress resistance, speed, arc of motion
 - c. Walking forward, retro, and sidestepping
 - d. Standing calf raises, wobble board
 - e. Wall slides
 - f. Leg press
 - g. Stationary bike
- 10. Encourage upper extremity strengthening for overall conditioning
- 11. Continue modalities

POW 4-10

- 1. Continue as above
- 2. Progress exercises for building strength and endurance
 - 4-6 sets of 15-20 reps
 - progress from double to single leg and concentric to eccentric
 - emphasis on closed chain activities only
 - a. leg press
 - b. squats
 - c. lunges (front/side/back)
 - d. step-ups
 - e. leg curls
 - f. hip strengthening
 - g. resisted walking
- 3. Exercises for balance and proprioception
 - progress from local to whole body
 - a. mini-tramp
 - b. Sport cord
 - c. Slide board
 - d. Swiss ball
- 4. Exercises for endurance
 - a. Bike
 - b. Stairmaster
 - c. Elliptical trainer
 - d. Treadmill walking
 - e. Aquatic exercise

POW 10-16

1. Continue as above but slowly progress weight and decrease reps (8-10)
 - a. Increase load
 - b. Decrease time and increase power
2. Progress walking to a fast walk then walk/jog on treadmill
 - a. High knee march
 - b. Figure of "8"
3. Begin jumping rope.
 - a. Shuttle

POW 16-return to sport

1. Progress jump roping to line jumps, then box jumps, and then distance jumps
2. Begin sport specific drills
3. Progress speed and intensity of above activities

Return to Athletics Criteria

1. Satisfactory clinical exam
2. <10% isokinetic strength deficit (Leg Press)
3. Completion of sport replication activity
4. Single leg hop test