ACL Reconstruction

Patellar tendon, Hamstring graft, Allograft

Precautions: Patient will ambulate with crutches (immobilizer or hinged brace, if prescribed) with WBAT unless instructed otherwise by physician. Patient may D/C crutches when they can ambulate securely, have no evidence of instability, have appropriate quad strength, and can perform normal gait pattern.

Phase I (1 – 5 days post-op)

- Wound care: Observe for signs of infection
- Modalities: prn for pain and inflammation (ice, IFC)
- Brace: Immobilizer or brace, if prescribed (hinged brace locked in full extension)
- Gait: WBAT, crutches prn
- ROM: Minimum 0 – 90 degrees, not more than 120 degrees
    - Passive positional stretches for flexion and extension
    - Ankle AROM

Phase II (5 days – 4 weeks post-op)

- Wound care: Observe for signs of infection and begin scar management techniques when incision is closed
- Modalities:
    - NMES for quads during quad sets and SLR
    - IFC and ice for pain and edema prn
    - sEMG for neuromuscular re-education for quad sets
- Brace:
    - Immobilizer if prescribed until quad control is sufficient to be safe with gait
    - Hinged brace set 0 -120 degrees- on at all times except in PT clinic
- Gait: WBAT, crutches prn
- ROM:
    - Minimum 0 – 90 degrees, not more than 120 degrees until 3 weeks post-op
    - Passive positional stretches and AROM for full flexion and extension of knee
    - Half revolutions on stationary bike
    - Increase / maintain patellar mobility with emphasis on superior glide
- Strengthening/Conditioning
    - NO resisted open chain strengthening, only closed chain (Step ups, Light leg press, etc.)
    - Quad sets (open and closed chain, multi-angle)
    - SLR
    - Proprioceptive activities as quad control allows

Initiation Date: 01-01-05 Revised Date: 06-04-14
Phone (815) 484-6990 * Fax (815) 484-6961

- UBE
- Stationary bike with well leg

Phase III (4 weeks – 10 weeks post-op)

- Wound care: Continue scar mobs
- Modalities:
  - Continue e-stim/sEMG for muscular re-education
  - Continue ice/IFC prn
- Brace:
  - By 6 weeks, D/C immobilizer
  - By 6 – 8 weeks, wean from hinged brace
- Gait: Normalize gait pattern on level surfaces and progress to step-over-step pattern on stairs
- ROM:
  - Emphasize full extension
  - By 8 weeks, full flexion
  - Patellar mobility
  - Rectus femoris / hip flexor stretches
- Strengthening/Conditioning:
  - Continue with phase II, increasing resistance as tolerated
  - At 6 – 8 weeks, begin light plyometrics, if pain-free (not until 10 – 12 weeks for Allogaft)
  - Stepper
  - Stationary bike
  - UBE
  - Pool, if available
  - Treadmill forward and retro (walking speed only until 8 weeks)
    - At 8 weeks, initiate jogging, if pain-free (not until 10 – 12 weeks for Allograft)
- Testing: Initiate Functional Test prior to 6 – 8 week physician follow-up appointment

Phase IV (10+ weeks post-op)

- Wound care: Continue scar mobilizations
- Modalities: Continue prn
- ROM: Full ROM
- Strengthening: Continue with phase III, increasing resistance and reps
  - Step up or step-over drills
  - Double leg jumps progressing to single to double and progressing to single to single
  - Line drills
  - Jumping drills

- Testing: Final Functional Testing: less than 25% deficit for non-athletes and less than 20% for athletes, in comparison to non-surgical side

12 + weeks post-op

Initiate work conditioning for job related injuries. Gradually initiate sport-specific drill and exercises including slow cutting and jumping (wait until 14 weeks post-op for Allograft). Follow up with school athletic trainer to continue sport-specific training and skills.

Adapted From:

1) Brotzman SB, Wilk KE. Clinical Orthopedic Rehabilitation. 2nd Ed. Philadelphia: Mosby; 2003
2) Rehabilitation Guide: Anterior Cruciate Ligament Reconstruction. Madison, WI: UW Health: University of Wisconsin Sports Medicine; 2000