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**Proximal Hamstring Tendon Repair Rehab Protocol**

**Weeks 0-6**

**Goal:**

- 1) Protection of the surgical repair

**Precautions:**

- 1) Non-weight bearing with crutches for 6 weeks with foot flat or with hip abduction brace with hamstring strap
- 2) No active hamstring contraction
- 3) No hip flexion greater than 45°
- 4) No active knee flexion against gravity
- 5) Knee extension limited pending intra-operative tension on the repair

**Durable Medical Equipment**

- 1) Bledose brace in 90 degrees of knee flexion for 6 weeks to be worn all the times including when you go to sleep
- 2) Game Ready Groin Wrap cold therapy for 6 times per day for 20 minutes per session
- 3) Crutches- non weight-bearing for 6 weeks

**Exercises:**

- 1) pelvic tilts (5 sec holds x 20/day)
- 2) NMES c SAQ (1/2 bolster) with hip flexion less than 20 degrees
- 3) isometrics hip abduction/adduction/external rotation (5 sec holds x 10/day)
- 4) Quadriceps sets (4 x 20 reps/day)
- 5) 5 Ankle pumps (20-30 reps/hour)
- 6) Begin passive range of motion of the knee and hip at week 2. Do not exceed 45° of hip flexion. Do not allow knee extension beyond the restrictions stated above and limited by the brace.
- 7) Begin gentle active range of motion of the knee and hip at week 4. Do not exceed 45° of hip flexion. Do not allow knee extension beyond the restrictions stated above and limited by the brace. No active knee flexion against gravity.

**Other:**

- 1) Light desensitization massage to the incision and posterior hip
- 2) scar massage
- 3) silicon patch over incision

## **Weeks 6-9**

### Goals:

- 1) Restoration of normal gait
- 2) Weight-bearing progression to full weight bearing as tolerated
- 3) Return of pain-free functional ADL

### **Precautions:**

- 1) No hamstring strengthening exercises
- 2) No hamstring stretching exercises

### Exercises:

- 1) Continue week 0-6 exercises
- 2) May begin active knee flexion against gravity (concentric)
- 3) Weight shifts
- 4) Straight leg raises or SAQ into SLR
- 5) Gentle quadruped rocking
- 6) Gentle stool stretches for hip flexion and adduction
- 7) Gluteus medius strengthening is progressed to isotonic in a side-lying position (clam shells)

## **Months 3-4**

### Goals:

- 1) Return to unrestricted activities of daily living (ADL) at home and work
- 2) Hamstring strengthening

### Exercises:

- 1) Continue week 6-9 exercises
- 2) Begin hamstring flexibility exercises
- 3) Begin hamstring strengthening exercises
  - Begin with hamstring curls strengthening exercises with the patient standing with the hip joint held in neutral position and the lower leg moving against gravity in pain-free arcs
  - Resistance is increased a pound at a time as tolerated with emphasis on high repetitions (50 reps) and high frequency (4-5 times/day)
  - When the patient is able to move through a full and pain-free knee flexion arc with 8-10 pounds of high reps, patients can transition from standing to machine hamstring curls.
- 4) Begin total leg and hip strengthening exercises:
  - Quarter squats: Begin bilaterally and progress to unilateral status
  - Heel raises: Begin bilaterally and progress to unilateral status
  - Gluteus maximus strength exercises progress from prone (heel pushes with the knee flexed at 90° to hip extension with the knee flexed at 90° to hip extension with an extended knee) to supine (bilateral to unilateral bridging)
  - Gluteus medius strengthening is further progressed to the upright position (hip hiking and multi-hip machine).

- Patients can begin unilateral knee extension and leg press activities with light resistance and increase resistance as the surgical hip tolerates.
- 5) Balance and Proprioception (Balance board → foam → dynadiscs)

## **Months 5-9**

### **Goal:**

- 1) Completion of a functional program for the patient's return to sport activity

### **Exercises:**

- 1) Continue week 12 exercises
- 2) Perform advanced proprioceptive training
- 3) Closed kinetic chain hamstring exercises, such as advanced step downs, double to single-leg Swiss ball hamstring curls, resisted incline hip extensions, Roman dead-lifts, and half to full squat progression with progressive resistance, can gradually be introduced.
- 4) Low level plyometrics, such as jump rope, step lunges in multiple directions with progression to walking lunges, can be introduced.
- 5) Patient may begin a light jogging progression
- 6) Return to sporting activities is typically allowed at 6-9 months postoperatively

### **Progression Criteria to Return to Sport**

- 1) No pain with normal daily activities
- 2) Hip and knee range of motion within functional limits
- 3) Community mobility without pain
- 4) Hamstring strength is 75% of the contralateral side (concentric and eccentric)