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FULKERSON OSTEOTOMY

PHASE I

Goals

- Control inflammation and pain
- Protect soft tissue and tubercle fixation
- CPM to 90 degrees (60 degrees when medial imbrication is also performed)
- Full active extension and 90 degrees of flexion
- Achieve quadriceps control

0-6 weeks

- Brace
 - Locked in extension for 6 weeks during ambulation
 - Sleep with brace locked for 4 weeks, then discontinue for sleep
 - May remove for CPM and exercises except straight leg raises
- Weight-Bearing Status
 - Weight-bearing as tolerated with crutches and brace locked in extension
- Therapeutic Exercises
 - Straight leg raises in all planes (use brace locked in extension for SLRs)
 - Heel slides to 90 degrees, calf pumps, quadriceps sets
 - Electrical stimulation and biofeedback to regain quad function
 - Patellar mobilization
 - Ankle ROM and resistive exercises with sports tubing (Theraband)

PHASE II

Criteria

- Good quad set, straight leg raise without extension lag
- 90 degrees of knee flexion
- Full extension

Goals

- Increase ROM
- Establish normal gait with unlocked brace
- Brace/Weight-bearing status
- Continue with full weight bearing
- Use crutches and unlock brace for ambulation, when quad is ready
- May discontinue crutches and brace when normal gait pattern and quad control is achieved

6- 8 weeks

- Therapeutic Exercises
 - Increase ROM
 - Progress to SLRs without brace
 - Mini-squats (0-45 degrees)
 - Stationary Bike (high seat, low tension)
 - Closed chain extension (leg press:0-45 degrees)
 - Pool walking/jogging
 - Toe raises
 - Hamstring and gastroc/soleus stretches
 - Proprioception
 - Mini-tramp standing
 - Stable and unstable platform (BAPS) with eyes open and closed
 - Standing ball throwing and catching

PHASE III

Criteria

- Normal gait
- Full range of motion
- Sufficient strength and proprioception to initiate functional activities

Goals

- Improve confidence in the knee
- Protect the patellofemoral joint
- Progress with strength, power, and proprioception
- Brace/Weight-Bearing Status
- Discontinue brace and crutches

8-12 weeks

- Therapeutic Exercise
 - Continue with flexibility exercises
 - Hamstring curls
 - Mini-squats and leg press to 60 degrees
 - StairMaster, elliptical trainer, cross-country ski machine, lap swimming
 - Stationary bike, increase resistance
 - Step-up, start 2 inches and increase to 8 inches
 - Continue to work on proprioception and balance (lateral slide board, ball throwing and catching on unstable surface)
 - Treadmill walking

PHASE IV

Criteria

- Full, pain-free range of motion
- No patellofemoral irritation
- Sufficient strength and proprioception to progress to recreational activities

Goals

- Return to unrestricted activity by 4-5 months

3 months+

- Therapeutic Exercises
 - Progress with flexibility and strengthening program
 - Advance with closed chain exercises
 - Begin pool jogging and progress to running on land
 - Begin to incorporate cutting drills into agility training
 - Advance heights with plyometric conditioning
 - Sports specific drills (start a 25% on speed and advance as tolerated)

Criteria for Return to Sports

- Full range of motion
- No effusion
- Quad and hamstring strength 90% of contralateral side
- No patellofemoral symptoms