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Physical Therapy Protocol

Patellar Stabilization with Tibial Tubercle Transfer and MPFL Reconstruction with Allograft

POSTOP REHABILITATION PROTOCOL:

TIBIAL TUBERCLE TRANSFER AND MPFL RECONSTRUCTION

Range of motion goals: 0-90 degrees week 2, 0-120 degrees by week 4, full flexion by week 6.

PHASE I: weeks 0-6

Weeks 0-2:

Goals:

1. Control pain and inflammation
2. Protect fixation and soft tissues
3. Regain quadriceps and VMO Control.

Brace: range of motion knee brace locked in extension for walking and sleeping, unlock while sitting

Range of motion: limit 0-90 deg

Weight bearing: **touch down weight bearing - foot flat**

Exercises:

1. Quadriceps sets
2. Hamstring isometrics
3. Straight leg raises in four planes with brace locked in extension
4. Non-weight bearing gastoc-soleus and hamstring stretches
5. Resisted ankle range of motion with therabands
6. Patellar mobilization when tolerated - Only medial, superior and inferior, Not lateral
7. ROM exercises - heel slides, seated knee flexion, prone dangle, passive resting extension with heel prop

Modalities:

1. Heat before
2. Ice after activities
3. Quadriceps stim - NMES to promote muscle activation

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Weeks 2-6:

Brace: range of motion knee brace locked in extension for ambulating and sleeping

Range of motion: increase to 0-90 deg by end of week 2. 120 degrees by week 4, full flexion by week 6.

Weight bearing: partial weight bearing with crutches

Exercises:

Continue above exercises:

1. As above
2. Proprioception/Balance
3. Isometrics

Phase II: weeks 6-12

ONLY progress to Phase II if patient has no signs of active inflammation, a good quadriceps set and appropriate amount of allowed flexion

Goals:

1. Increase range of motion to full
2. Avoid over-stressing fixation
3. Increase quadriceps and VMO control for restoration of proper patellar tracking

Weeks 6-8:

Brace: keep locked in extension while ambulating and sleeping until patient shows adequate quadriceps control (usually minimum of 8 weeks)

Range of motion: slowly increase range of motion to goal of full flexion by 10-12 weeks

Weight bearing: if shows radiographic signs of healing, then will progress to weight-bearing as tolerated with brace locked in extension

Exercises:

1. Continue Phase I exercises
2. Balance and proprioceptive exercises
3. SLRs without brace
4. Weight bearing gastroc-soleus stretches
5. Stationary bike with low resistance and high seat position to decrease patellofemoral joint compression forces

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Weeks: 8-12

Brace: May discontinue brace only after radiographic bone healing and good, active control of the knee are demonstrated; may DC crutches

Range of motion: progress to full range of motion

Exercises:

1. Step-ups
2. Closed kinetic chain terminal knee extension with resistive tubing or weight machine
3. Hamstring curls
4. Toe raises
5. Leg press from 0-45 deg of flexion
6. Flexibility and proprioception exercises
7. Progress to moderate resistance on stationary bike
8. Begin treadmill walking

PHASE III: 4 months to 6 months

Goal:

1. Good to normal quadriceps strength
2. No evidence of patellar instability
3. No Soft tissue complaints
4. Normal gait pattern

Exercises:

1. Open and closed kinetic chain strengthening
2. Pool running program
3. Increase walking difficulty and intensity of treadmill, bike, and elliptical trainer - But no jogging, no running and no single or double legged hop
4. Only after 5 months - start to introduce light jog, patient must have quadriceps girth 50% of opposite leg
5. Work on proprioceptive activities

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PHASE IV: 6 months to 1 year

Goal:

1. Slowly increase the patient's activities with goal of playing sports by 9-12 months postop.

Exercises:

2. Increase intensity and distance running
3. Progress to running and sprinting program
4. Continue proprioception
5. No pivoting until 7 months postop and until quadriceps girth is 75% size of opposite leg.
6. Sport specific drills, agility drills

Clearance:

After 9 months - Patient will not be cleared for sports until their quadriceps girth is 100% equal to the opposite knee, and they have good balance.

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