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Meniscal Allograft Transplant Procedure of the Knee - Postoperative Rehab Protocol

You will see a TMI physical therapist in Dr. Robertson's office on post-operative day #1 and begin a rehabilitation program. You will wear a hinged knee brace for 6-8 weeks following surgery.

Postoperative Phase I: Early Protection Phase (Weeks 0 to 6)

Goals

- ROM 0 to 90 degrees. Protect the graft by limiting flexion to 90 degrees.
- Prevents quad inhibition
- Control postoperative pain/swelling
- Normal proximal muscle strength
- Independence with home exercise program

Precautions

- Maintain weight bearing restrictions
- Hinged brace at all times except for showers. (shower seated)
- Postoperative brace will be locked for ambulation for the first 6 weeks. Brace unlocked 0-90 while seated for 6 weeks.
- TTWB in brace with crutches for first 2 weeks, locked straight
- Advance to partial weight bearing at 2 weeks but remained locked until week 6.
- At 6 weeks: Progressive advancement to WBAT from 6-8 wks, discontinue brace and use crutches to reinforce proper gait mechanics

Treatment Plan

- AAROM exercises (pain-free range of motion)
- Towel extensions
- Patellar mobilization
- Quadriceps reeducation (quad sets +/- E-stim)
- Straight leg raises (all planes)
- Well-leg stationary bike for ROM - low resistance, keep flexion angle < 90 degrees. May "Rock for Range" using well-leg immediately.

- Upper extremity cardiovascular exercises, as tolerated
- Hip progressive resistance exercises
- May start Alter-G ambulation for gait training at 50% body weight at 5 weeks, progression per MD

Criteria for Progression to Phase II

- MD direction for progressive weight-bearing (week 6)
- Proximal muscle strength 5/5
- ROM 0 to 90°
- Supine SLR without an extension lag

Postoperative Phase II (Weeks 6 to 12)

Goals

- ROM 0 to within normal limits
- Normal patellar mobility
- Restore normal gait
- Ascend 8 inch stairs with good control and without pain

Precautions

- Avoid descending stairs reciprocally until adequate quadriceps control
- Avoid pain with therapeutic exercise and functional activities

Treatment Plan

- Progressive weight-bearing / gait training with crutches
 - Discontinue crutches when gait is non-antalgic
- Discontinue brace at 6 weeks.
- Pool exercises and gait training via Alter-G
- AAROM exercises
- Leg press 0 to 60°
- Mini-squats
- Retrograde treadmill ambulation
- Proprioception training (i.e. balance board)
- Initiate forward step-up program
- SLRs (progressive resistance)
- Lower extremity
- Home exercise program

Criteria for Progression to Phase III

- ROM 0 to WNL
- Normal gait pattern
- Demonstrated ability to ascend 8 inch step
- Normal patellar mobility

Postoperative Phase III (Weeks 12 to 20)

Goals

- Return to normal ADL
- 85% limb symmetry on isokinetic testing
- Improve lower extremity flexibility
- Demonstrate ability to descend 8 inch stairs with good control and without pain

Precautions

- Avoid pain with therapeutic exercise and functional activities
- Avoid running until adequate strength development and surgeons clearance

Treatment Plan

- Progress squat program
- Initiate step down program
- Stairmaster and elliptical
- Leg Press (emphasizing eccentrics)
- Advance proprioception training (perturbations)
- Retrograde treadmill ambulation/running
- Jogging program on Alter-G with gradual increase in body weight at 12-16 weeks if tolerated
- Hamstring curls/proximal strengthening
- Lower extremity stretching
- Agility exercises (sports cord) at 16 weeks if tolerated
- Home exercise program

Criteria for Progression to Phase IV

- 85% limb symmetry on isokinetic testing
- Demonstrated ability to descend 8 inch step with good leg control and w/o pain

Postoperative Phase IV: Return to Sport (Weeks 20 and Beyond)

Goals

- Lack of apprehension with sport-specific movements
- Maximize strength and flexibility to meet demands of individual's sport activity
- Hop test \geq 85% limb symmetry

Precautions

- Avoid pain with therapeutic exercise and functional activities
- Avoid sport activity until adequate strength development and surgeons clearance

Treatment Plan

- Continue to advance lower extremity strengthening, flexibility, and agility programs
- Forward running

- Plyometric program
- Monitor patient's activity level throughout course of rehabilitation and adjust accordingly
- Encourage compliance to home exercise program

Criteria for Discharge

- Lack of apprehension with sport-specific movements
- Hop test \geq 85% limb symmetry
- Flexibility to accepted levels of sports performance
- Independence with gym program for maintenance and progression of therapeutic exercises