UCLA DEPARTMENT OF ORTHOPAEDIC SURGERY
SPORTS MEDICINE

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ARTHROSCOPY with OSTEOCHODNRAL ALLOGRAFT IMPLANTATION

REHABILITATION PROGRESSION

The following are guidelines for rehabilitation progression following menisectomy, loose body removed, or debridement etc. Progression through each phase is based on patient status (e.g. healing, constraints, function), clinical exam finding, and physician advisement. Please consult the attending physician if there is uncertainty regarding the progression to the next phase of rehabilitation.

PHASE I (approximately 6 weeks)
Begins immediately following surgery until specified criteria met to advance to Phase II.

Goals:

- Diminish swelling.
- Protect healing soft tissue structures.
- Improve knee flexion and extension range of motion – no limit on ROM
- Increase lower extremity strength including quadriceps muscle re-education.
- Educate patient regarding limitations and the rehabilitation process.
- Prevent Quadriceps inhibition

Weightbearing Status

- Non-weightbearing x 4 weeks, then 50% weightbearing x 2 weeks, then full weightbearing at 6 weeks.
- WBAT permitted at 1 to 2 weeks postop if patellar or trochlear lesion however brace must be locked in extension for all weight bearing activities.
- Use brace locked at 0 degrees for weight bearing until 8 weeks post-op.

Therapeutic Exercises:

- CPM 4 to 8 hours per day, range of motion as tolerated, for 4 weeks
- Quad sets and isometric adduction with biofeedback for VMO (if necessary)
- Heel slides (AAROM)
- Ankle Pumps

- SLR in flexion abduction, adduction, and extension.
- Functional Electrical Stimulation may be used for trace to poor quad contraction
- Hamstring and calf stretching
- May begin aquatic therapy at 6 weeks once incisions heal well with emphasis on normalization of gait.
- Stationary bike when patient has sufficient knee flexion. Can start partial revolution to recover motion if patient does not have sufficient knee flexion.

PHASE II

Begins phase II once the following criteria are met. Criteria for advancement to Phase II:

- No quad lag during SLR
- Approximately 100° active knee flexion
- Full active knee extension
- No signs of active inflammation

Goals:

- Increase range of flexion
- Increase lower extremity strength and flexibility
- Restore normal gait
- Improve balance and proprioception

Weightbearing status:

May begin ambulation without crutches if following criteria are met (at 6 weeks):

- No extension lag with SLR
- Full active knee extension
- Knee flexion of 90°-100º
- Non-antalgic gait pattern (may ambulate with one crutch or a cane to normalize gait before ambulating without assistive device)

Therapeutic Exercises:

- Wall slides at 6 weeks from 0-45º knee flexion, progressing to mini-squats
- 4-way hip for flexion, extension, abduction, and adduction
- Closed kinetic chain terminal knee extension with resistive tubing or weight machine
- Calf raises
- Balance and proprioceptive activities (including single leg stance, KAT and BAPS)
- Treadmill walking with emphasis on normalization of gait pattern – at 8 weeks
- ITB and hip flexor stretching, as necessary
- Continue Progressive Weight Bearing as Tolerated / Gait Training with crutches (if needed)
- AAROM exercises
- Patella mobilizations
- Mini Squats
- Proprioception / Balance training:
    - Proprioception board / Contralateral Theraband Exercises / Balance systems

- Initiate Forward Step Up program
- Stairmaster
- SLR's (progressive resistance)
- Lower extremity flexibility exercises
- OKC knee extension to 40° – (pain / crepitus free arc)

PHASE III (approximately 12 weeks)
Begins approximately once the following criteria are met. Criteria for advancement to Phase III:

- Normal gait
- Full flexion of involved knee or within 10º difference from uninvolved knee
- Good quadriceps strength
- Good dynamic control with no patellofemoral complaints
- Clearance by physician to begin more concentrated closed kinetic chain progression

Goals:

- Restore and residual loss of range of motion
- Continue improving quadriceps strength
- Improve functional strength and proprioception

Therapeutic Exercises:

- Quadriceps stretching
- Hamstring curl
- Leg press from 1-45º knee flexion, then once good control progress 0 to 90º emphasizing eccentrics
- Closed kinetic chain progression
- Abduction on 4-way hip
- Nordic Trac
- Jogging in pool with wet vest or belt
- Underwater treadmill/Alter G system (gait training)
- Unweighted jogging, if necessary
- Initiate Step Down program
- Hamstring curls / Proximal strengthening
- Forward Step Down Test (NeuroCom)

PHASE IV: (approximately 18 weeks +)
Begins once criteria are met and extends until patient has returned to work or desired activity. Criteria for advancement to Phase IV:

- Release by physician to resume full or partial activity
- No patellofemoral or soft tissue complaints
- Necessary joint range of motion, muscle strength and endurance, and proprioception to safely return to work or athletic participation.

Goals:

- Continue improvements in quadriceps strength

- Improve functional strength and proprioception
- Return to appropriate activity level

Therapeutic Exercises:

Functional progression which may include, but is not limited to:

- Continue to advance LE strengthening, flexibility & agility programs
- Brace for sport activity (if recommended by MD to unload injured compartment)
- Slide Board
- Walk/jog progression
- Vertical jump
- Forward and backward running, cutting, figure 8, and carioca
- Sport specific drills
- Plyometric program
- Monitor patient's activity level throughout course of rehabilitation
- Reassess patient's complaint's (i.e. pain / swelling daily – adjust program accordingly)
- Encourage compliance to home therapeutic exercise program
- Home therapeutic exercise program: Evaluation based

Criteria for Discharge:

- Isokinetic & Hop Testing ≥ 85% limb symmetry
- Lack of apprehension with sport specific movements
- Flexibility to accepted levels of sport performance
- Independence with gym program for maintenance and progression of therapeutic exercise program at discharge