

## Hospital For Special Surgery Sports Rehabilitation & Performance Center Osteochondral Allograft Post-Operative Guideline (Condylar Lesions)

### ***Post – Operative Phase I (Post-Operative Week 0-6) Osteochondral Allograft Procedure / Condylar Lesions***

#### ***Goals:***

- Control post-operative pain / swelling
- Range of Motion 0 → 130°
- Prevent Quadriceps inhibition
- Restore normal gait
- Normalize proximal musculature muscle strength
- Independence in home therapeutic exercise program

#### ***Precautions:***

- Progressive weight bearing with crutches
- Avoid neglect of range of motion exercises

#### ***Treatment Strategies:***

- Continuous Passive Motion (CPM) (4-6 hours/day)
- Active – Assistive Range of Motion Exercises (Pain-free ROM)
- Towel extensions
- Patella mobilization
- Progressive Weight Bearing as Tolerated with crutches  
D/C crutches when gait is non-antalgic
- Computerized forceplate (NeuroCom) for weight bearing progression / patient education
- Underwater treadmill system (gait training) if incision benign
- Quadriceps re-education (Quad Sets with EMS or EMG)
- Multiple Angle Quadriceps Isometrics (Bilaterally – Submaximal, Avoid lesion)
- Short Crank ergometry → Standard ergometry
- SLR's (all planes)
- Hip progressive resisted exercises
- Leg Press (60→0° arc) Bilaterally
- Unloader brace / Patella sleeve per MD preference
- Pool exercises
- Plantar Flexion Theraband
- Lower Extremity Flexibility exercises
- Upper extremity cardiovascular exercises as tolerated
- Cryotherapy
- Home therapeutic exercise program: Evaluation based
- Emphasize patient compliance to home therapeutic exercise program and weight bearing progression

#### ***Criteria for Advancement:***

- Normalized gait pattern
- ROM 0 → 130°
- Proximal Muscle strength 5/5
- SLR (supine) without extension lag

**Post – Operative Phase 2 (week 6-12)**  
**Osteochondral Allograft Procedure / Condylar Lesions****Goals:**

- ROM 0° → WNL
- Normal patella mobility
- Ascend 8”stairs with good control without pain

**Precautions:**

- Avoid descending stairs reciprocally until adequate quadriceps control & lower extremity alignment is demonstrated
- Avoid pain with therapeutic exercise & functional activities

**Treatment Strategies:**

- Continue Progressive Weight Bearing as Tolerated /Gait Training with crutches (if needed)
  - D/C crutches when gait is non-antalgic
- Unloader brace / Patella sleeve per MD preference
- Underwater treadmill system (gait training)
- Gait unloader device
- AAROM exercises
- Patella mobilizations
- Leg Press (90→0° arc) Bilaterally → Eccentric
- Mini Squats
- Retrograde treadmill ambulation
- 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*)
- Home therapeutic exercise program: Evaluation based

**Criteria for Advancement:**

- ROM 0° → WNL
- Demonstrate ability to ascend 8” step
- Normal patella mobility

**Post – Operative Phase 3 (week 12-18)**  
**Osteochondral Allograft Procedure / Condylar Lesions****Goals:**

- Demonstrate ability to descend 8”stairs with good leg control without pain
- 85% limb symmetry on Isokinetic testing & Forward Step Down Test
- Return to normal ADL
- Improve lower extremity flexibility

**Precautions:**

- Avoid pain with therapeutic exercise & functional activities
- Avoid running till adequate strength development and MD clearance

**Treatment Strategies:**

- Progress Squat program
- Initiate Step Down program
- Leg Press (90 → 0° emphasizing eccentrics)
- OKC knee extensions 90 → 0° (*pain/crepituss free arc*)
- Advanced proprioception training (perturbations)
- Agility exercises (sport cord)
- Elliptical Trainer
- Retrograde treadmill ambulation / running
- Hamstring curls / Proximal strengthening
- Lower extremity stretching
- Forward Step Down Test (NeuroCom)
- Isokinetic Test
- Home therapeutic exercise program: Evaluation based

**Criteria for Advancement:**

- Ability to descend 8”stairs with good leg control without pain
- 85% limb symmetry on Isokinetic testing & Forward Step Down Test

## **Post – Operative Phase 4 – Return to Sport (week 18 - ?)** ***Osteochondral Allograft Procedure / Condylar Lesions***

### ***Goals:***

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

### ***Precautions:***

- Avoid pain with therapeutic exercise & functional activities
- Avoid sport activity till adequate strength development and MD clearance

### ***Treatment Strategies:***

- Continue to advance LE strengthening, flexibility & agility programs
- Forward running
- Plyometric program
- Brace for sport activity (MD preference)
- 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  $\geq$  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