Intermountain
TOSH – The Orthopedic Specialty Hospital

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PERIACETABULAR OSTEOTOMY PHYSICAL THERAPY PROTOCOL

The intent of this protocol is to provide guidelines for progression of rehabilitation and is not intended to serve as a substitution for clinical decision-making. Progression through each phase of rehabilitation should take into account tissue-healing time frames, clinical objective findings, and MD approval to ensure structural stability. There will be variability between patients in terms of time frames and it is crucial not to progress through phases until the individual meets the appropriate requirements.

INITIAL PRECAUTIONS

Weight Bearing:

- 1-6 weeks→ PWB @ 30%
- 6-8 weeks→ PWB @ 50%
- 8+ weeks→ FWB when appropriate
- Crutch weaning and D/C is dependent upon follow up X-ray and appropriate pelvic stability strength

Initial ROM Related Restrictions:

- Flexion to 90º for 2 weeks
- Recommended prone positioning during phase 1 to limit anterior hip stiffness

PHASE 1 – PROTECTION PHASE (1-8)

Goals:

- Optimize tissue healing and limit scar formation
- Reduce swelling and pain
- Restore hip ROM
- Ensure safe gait pattern w/assistive devices
- Promote normal proprioceptive and neuromuscular control

Tissue Healing

- PRICE – Protection, Rest, Ice, Compression, Elevation
- Scar massage after stitches have been removed and incision is healed

Gait

- Ensure proper gait pattern with assistive devices and appropriate WB'ing precautions per time frame
- Weaning from crutches after radiographic healing
    - Begin with tall kneeling and standing weight shifting exercises
    - Progress weight on two crutches

- Focus on gait exercises to promote normalized hip control with appropriate lumbo-pelvic stabilization

POW 1-4

- Isometrics (focus on glut, quad and abdominal isometrics)
- Prone positioning per tolerance

POW 4-6

- Passive Range of Motion
  - Limit open chain flexion PROM to 90 degrees
- Active/Active Assistive Range of Motion
  - Q-ped ROM ex's for mobility and proprioception
  - Thoracic and lumbar mobility stretches
- Aquatic therapy (Begin POW 4 if wound is healed)
  - AROM in deep end
  - Aquajogging and biking
  - Fwd/Bkwd walking in chest high water

POW 6-8

- Begin table strengthening (bridging, clams, reverse clams, etc)
- Standing skaters (abduction with IR) for glut medius
- Tall kneeling exercises for endurance and proprioception
- Prone IR/ER rhythmic stabilization exercises
- Quadruped stabilization exercises
- Introduce rolling progressions for trunk sequencing

PHASE 2 – INITIAL STRENGTHENING (8-14)

Criteria for advancement to Phase 2:

- Pain-free PROM
- Pain-free PWB gait
- Maintain stable tall kneeling position without hip discomfort

Goals:

- Pain-free ROM near pre-operative values (Except IR)
- Rotary pelvic and hip stability in order to tolerate faster, dynamic plyometric ex's
- Wean from crutches and normalize gait
- Increase trunk and LE strength to allow for:
  - Walking 1 mile without any increased pain
  - Symmetrical squat to 90 degrees w/o discomfort
  - Symmetrical stair use (ascending and descending)
  - Repetitive single leg heel touch off of 8" box w/stable pelvis

Range of Motion

- Active/Active Assistive Range of Motion
  - Stationary bike without resistance 20 minutes per day (progress resistance slowly and per tolerance)
  - Terminal stretches/Yoga poses

- Continue PROM to normalize hip mobility (no ROM restrictions)

Strength, Proprioception and Neuromuscular Re-education

- Begin double leg CKC strengthening activities
- Consider the necessity for CKC proprioceptive training during this phase to correct old and dysfunctional movement patterns
- Progress to single leg strengthening including static, balance, and dynamic activities when appropriate
- Integrate UE and trunk mobility with LE stability activities
- Begin 1-on-1 reformer pilates if desired (POW 12)

Cardio

- Elliptical trainer / Stair climber (POW 16)
- Swimming without leg kick (pool buoy) beginning (POW 10). Leg kick is allowed at POW 16 if no pain with repetitive hip flexion

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PHASE 3 – ADVANCED STRENGTHENING (16+)

Criteria for Advancement to Phase 3:

- ROM to preoperative measures (IR exception)
- Ascending and descending stairs with involved leg without pain or compensation
- Gait without deviations or pain after at least 1 mile of walking on level surface
- Rotary stability in order to perform Bird Dog isometric holds for 45 seconds on each side
- Forward and Side planks for 45 seconds
- Demonstrate 2 minutes of squat to 90 degrees with symmetrical form
- Demonstrate ability to perform single leg heel touch off 8" box w/level pelvis

Goals:

- Restore multi-directional strength and agility
- Restore ability to absorb impact on leg (plyometric strength)
- Perform repetitive hip flexion in standing without pain or pinching in order to demonstrate the ability to safely return to repetitive activities (hiking/jogging/flutter kick)
- Eccentrically control jump down off 10" box with proper control into CKC hip flexion/squat position

Strengthening, Proprioception and Neuromuscular Re-education

- Implement CKC activities that incorporate dissociative patterning between upper and lower extremity
- Progress single leg endurance/strength in all 3 planes of movement
- Progress to light dynamic/plyometric activities (once MD confirms structural stability via X-ray)
- Ensure ability absorb impact at hip, knee, and ankle joints

Cardio

*** No running or kicking activities (swimming excluded) until a minimum of 5 months once patient has had MD clear them for activities following X-rays and ability to perform functional requirements safely and correctly***

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PHASE 4 – RETURN TO SPORT

Criteria for advancement to Phase 4

- Pass the Vail Sports Test
- Y-balance test to 90% of opposite extremity
- Pain free with all strengthening and plyometric activities

Strengthening/Plyometrics

- Perform sport specific strength training and drills until patient begins team training progression
- Multi-planar power activities
- Return to sport progression programs as necessary

This protocol was adapted with permission from Eduardo Novais, MD Harvard Medical School/Boston Children's Hospital.

This protocol was developed by Brad Schoenthaler, PT, MS, OCS

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