HIP ARTHROSCOPY REVISION LABRAL REPAIR | DEBRIDEMENT POST-OPERATIVE GUIDELINES

The following Hip Arthroscopy Revision Labral Repair | Debridement Guidelines were developed by HSS Rehabilitation. Progression is both criteria-based and patient specific. Phases and time frames are designed to give the clinician a general sense of progression but do not replace clinical judgement. The rehabilitation program following hip arthroscopy must be tailored to the exact surgical procedure performed, taking into account tissue and bone healing properties.

These guidelines were developed to balance healing, gentle restoration of hip range of motion (ROM), and muscular balance and stability in the core, pelvic floor and hip. Special attention is given to prevent psoas muscle irritation during patient education of activities of daily living (ADL) and during physical therapy exercises. The underlying etiology of hip pathology is closely examined during the rehabilitation process to ensure mechanics throughout the kinematic chain are not contributing factors to the pathological process.

FOLLOW PHYSICIAN'S MODIFICATIONS AS PRESCRIBED.

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Post-Operative Phase 1: Days 1-7

PRECAUTIONS

- Avoid capsular irritation and operative site overload
- Avoid pivoting or rotating hip during ambulation
- Avoid symptom provocation during ambulation, ADL, therapeutic exercise
- Avoid active hip flexion with long lever arm (e.g., straight leg raise)
- No open chain or isolated hip muscle activation unless isometric
- Protective weight bearing (WB) (20%) for 2-3 weeks, unless specified by surgeon
- Limit external rotation (ER), as per surgeon (0˚-30˚)
- Ambulation to fatigue only

ASSESSMENT

- Lower Extremity Functional Scale (LEFS)
- Numeric Pain Rating Scale (NPRS)
- Screen for red flags
- Wound and sutures
- Passive range of motion (PROM)
- Pelvic/hip/lower extremity muscle activity (quadriceps, gluteals, core musculature)
- Neurological status (global and local to surgical site)
- Ability to transfer
- Sitting tolerance
- Dressing
- Brace (if applicable)
- Ambulation with use of assistive device
- Stair ambulation technique and tolerance
- Use of cryotherapy
- Precaution awareness

TREATMENT RECOMMENDATIONS

- Focus on core and hip stability exercises utilizing isometrics and co-contractions of muscle groups
- Short crank or regular bike with minimal resistance for 10 to 20 minutes without pain
    - Patients who have had a psoas release or pelvic floor pain: while not contraindicated, proceed with caution; stop if pain is present
- Progress ROM as tolerated, e.g.:
    - Quadruped rocking into hip flexion
    - Active assisted range of motion internal rotation/external rotation (IR/ER)
- Patient education: activity modification, bed mobility, positioning, transitional movements
- Gait training with appropriate assistive device on level surfaces and stairs
    - Instruct in a step to gait pattern
- Home exercise program (HEP) to include: abdominal setting in supine, quadriceps setting in supine with towel, reclined knee extension

CRITERIA FOR ADVANCEMENT

- Compliance with self-care, home management, activity modification
- Normalized gait with appropriate assistive device
- No pain at rest and ambulation
- Passive range of motion expectations- monitor for pain
    - Hip flexion 75°
    - Hip ER 0°
    - Hip IR 15°

EMPHASIZE

- Minimizing pain and inflammation
- Protection of surgical site
- Patient compliance with activity modification
- With gait training, emphasis should be placed on symmetrical and reciprocal pain-free gait, rather than on eliminating assistive devices

MODIFICATIONS TO PHASE 1

- No active ER for 4 weeks if a patient has concomitant pelvic floor pathology
- CPM and PROM limitations may be more strict if the primary reason for revision was found to be capsular insufficiency

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Post-Operative Phase 2: Weeks 2-6

PRECAUTIONS

- If the primary reason for revision is found to be capsular insufficiency PROM should be limited to Flexion 90˚, IR 15˚, ER 15˚, Extension 0˚, for 4 weeks with toe-touch WB for 0-2 weeks and partial WB 2-4 weeks, unless otherwise directed by surgeon
- Avoid premature discharge of assistive device - continue to use assistive device until non-antalgic gait
- Avoid symptom provocation during ADL or therapeutic exercise
- Minimize faulty movement patterns and posture
- Limit repeated active hip flexion and ER if symptomatic
- Avoid premature use of gym equipment for hip strengthening
- Progress WB to partial WB at 2 weeks, WB as tolerated at 4 weeks, as per surgeon

ASSESSMENT

- LEFS
- NPRS
- PROM (hip flexion 90° by week 4)
- Work and ADL tolerance
- Neurological status (peripheral nerve irritation)
- Soft tissue mobility (e.g., tensor fascia lata, quadriceps, adductor muscle group, gluteus medius)

TREATMENT RECOMMENDATIONS

- Soft tissue mobilization to hypertonic muscles only
- Hip ROM with a stable pelvis: isometric adduction/ abduction with abdominal brace, quadruped rocking
- Hip strengthening, e.g.:
    - Closed chain function and stability movements
        - Gluteal bridges, standing mini squats
    - Open chain hip extension to neutral with abduction
- Core control progressions either from upper extremity movement patterns or functional, closed chain movements

- Functional strength to include:
    - Stationary bicycle 10-20 minutes daily
    - Prone core and gluteal firing sequence
    - Leg press after 3 weeks
    - Squats with emphasis on hip driven motion and erect spine
    - Trunk stabilization progression
    - Standing trunk stability with elastic bands, e.g., Paloff press, pull down
- Proprioception and balance exercises: progress from double limb support to single limb
- Cryotherapy with compression

CRITERIA FOR ADVANCEMENT

- Upright bicycle tolerance 10-20 minutes daily
- Bilateral squat with hip driven motion and lumbopelvic stability
- Pelvic control during single limb stance
- Pain-free ADL
- Well controlled, pain free, ambulation with up to 1 assistive device
- PROM expectations- monitor for pain
    - Hip flexion 90˚
    - Hip IR 20˚

EMPHASIZE

- Depending on tolerance, bias exercises towards lighter resistance and higher repetitions, if possible. Pain-free isometric holds are also recommended.
- Minimizing pain and inflammation
- Patient compliance with activity modification

MODIFICATIONS TO PHASE 2

- If symptomatic at the site of surgery or surrounding area, encourage regression to assistive device in order to mitigate symptoms

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Post-Operative Phase 3: Weeks 7-12

PRECAUTIONS

- Avoid symptom provocation, e.g., minimize active hip flexion if symptomatic
- Favor quality of movement over quantity
- Avoid overuse of soft tissue mobilization and aggressive PROM and stretching
- Utilize manual therapy as a supplement to strengthening
- Gym progression done with physical therapist oversight

ASSESSMENT

- LEFS
- NPRS
- PROM
- Work and ADL tolerance
- Cardiovascular exercise tolerance
- Squat mechanics
- Forward step up/step down control
- Soft tissue extensibility

TREATMENT RECOMMENDATIONS

- Progress pain free ROM at end range
- Demonstrate moderate level of trunk stability in functional patterns, e.g.:
    - Quadruped stability
    - Kneeling trunk stability and rotational strength
    - Pallof press and rotations
    - Standing diagonals
- Hip strengthening in closed chain, e.g.:
    - Squats with emphasis on symmetrical hip driven motion
    - Lunges - static and traveling
- Progress functional strength to include:
    - Leg press single limb progressions
    - Step ups/step downs
        - Progress height slowly prior to adding weight or external stimulus
- Isometric to eccentric lower abdominal and psoas strengthening

- Cross training: bicycle and progress to elliptical trainer - observe for good trunk and pelvic control
- Proprioception and balance exercises, e.g.:
    - Progress from double to single limb support with perturbations
    - Windmills, lawnmowers
    - Star Excursion

CRITERIA FOR ADVANCEMENT

- Normalized gait without an assistive device
- Good dynamic balance bilateral and unilateral
- Manual muscle testing 5/5 lower extremity strength
- Optimize hip PROM: Flexion 110°, IR 30°, ER 45°, as per surgeon
- Pelvic control and pain-free with single limb activities
- Independent HEP and gym program as instructed
- Trunk control: 60 second static front/side planks, bird dog series, 15-30 seconds hold unilateral gluteal bridge with trunk and pelvic control

EMPHASIZE

- Minimize pain and inflammation
- Patient compliance with activity modification
- Protect hip flexors
- Restore functional movement patterns

MODIFICATIONS TO PHASE 3

- If tolerated, bias exercise prescription towards heavier resistance and less repetitions to build strength and power, preparing for a ‘return-to-sport’ phase

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Post-Operative Phase 4: Weeks 13-16

PRECAUTIONS

- Avoid symptom provocation

ASSESSMENT

- LEFS
- NPRS
- PROM
- Work and ADL tolerance
- Cardiovascular exercise tolerance
- Functional assessment
    - Squat mechanics
    - Forward step up/step down control
    - Single leg stance
    - Single leg gluteal bridge
    - Jumping and hopping
- Soft tissue extensibility

TREATMENT RECOMMENDATIONS

- HEP and gym program, as instructed: strength training and flexibility exercises
- Closely monitor for adequate strength and power base, bearing in mind patient's long-term goals
- Begin sport specific exercise progression
    - Develop functional progression control
- Advance plyometric training: double to single leg progressions
- Dynamic balance activities
- Advance training of trunk for strength and endurance
    - Dynamic planks front/side up to 30 seconds
    - Address remaining muscle imbalances
- Initiate running program with sufficient single leg stability

CRITERIA FOR ADVANCEMENT

- Lumbopelvic and hip strength/stability while maintaining pelvic control
- 0/10 pain with advanced activities
- Optimal ROM for activity demands
- Independent HEP and gym exercise program
- Minimal post-exercise soreness

EMPHASIZE

- Self-monitoring of symptom provocation
- Optimize ROM and strength
- Functional strengthening

MODIFICATIONS TO PHASE 4

- **Begin return to sport phase of rehab focusing on movements in 1 plane and progressing to multi-planar motions. Begin with slow movements and work towards propulsive or plyometric movements. Weight-training should include heavier resistance with less repetitions. Initiation of running program should be started once good single leg and trunk stability achieved, i.e.:**
    - 8” step up/down with pelvic control
    - 30-45 second single leg gluteal bridge with pelvic and trunk control
    - Repeated pain-free single leg squats with adequate control
    - Monitor for weakness/faulty movement patterns
    - Pelvic and LE control during plyometric exercises

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Post-Operative Phase 5: Return to Sport (if applicable)

PRECAUTIONS

- Avoid pain with therapeutic exercise and functional activities
- Avoid too much too soon- monitor exercise and activity dosing
- Don't ignore functional progressions
- Be certain to incorporate rest and recovery

ASSESSMENT

- LEFS
- NPRS
- Quantitative assessments for limb symmetry, e.g.:
    - LE strength- hand held dynamometry or isokinetic testing if available
    - Flexibility
    - Hop Test
    - Star Excursion Balance Test
    - T-Test of Agility
- Functional assessment, e.g. HSS Quality of Movement Assessment (QMA)
    - Access for movement strategy, control, alignment, deceleration and cutting:
        - Squat
        - Single leg stance
        - Forward step down
        - Single leg squat
        - Single leg gluteal bridge
        - Jumping and hopping
        - Deceleration and cutting

TREATMENT RECOMMENDATIONS

- Monitor running progression to ensure appropriate technique and control
- Advance proprioceptive balance training
- Advance LE strengthening (bilateral and single leg)
- Plyometric progressions, e.g. cutting/agility skills/external perturbation
- Sport-specific agility training

- Increase endurance and activity tolerance
- Sport-specific multidirectional trunk stabilization
- Progress total body multidirectional motor control exercises to meet sport-specific demands

CRITERIA FOR DISCHARGE

- Lack of pain, swelling and apprehension with sports-specific movements
- Quantitative assessments ≥ 90% of contralateral LE
- Cardiovascular endurance meets the demand of sport
- Functional strength and mobility without compensatory movement patterns
- Independent with gym or return to sport program

EMPHASIZE

- Self-monitoring of exercise volume and load progression
- Sport specific speed and power drills
- Agility, change of direction and deceleration
- Collaboration with appropriate trainer, coach or performance specialist
- Don’t ignore functional progressions
- Be certain to incorporate rest and recovery

MODIFICATIONS TO PHASE 5

- Collaboration with trainer, coach or performance specialist. Patient education must focus on self-monitoring of exercise and sports training to ensure proper volume and load progression

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