KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

The following meniscectomy post-operative 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. Progression through the phases may vary in individuals with concomitant injuries such as degenerative joint disease, patellofemoral pain syndrome and ligament insufficiency.

FOLLOW SURGEON MODIFICATIONS AS PRESCRIBED.

KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

Pre-Operative Phase

PRECAUTIONS

- Avoid pain with ROM and strengthening exercises
- Monitor response to load to avoid reactive pain or effusion

ASSESSMENT

- Lower Extremity Functional Scale (LEFS)
- International Knee Documentation Committee (IKDC)
- Single Assessment Numeric Evaluation (SANE)
- Numeric pain rating scale (NPRS)
- Girth measurement (thigh and joint line)
- Lower extremity (LE) active range of motion (AROM) and passive range of motion (PROM)
- LE flexibility
- LE Strength: manual muscle test (MMT) or handheld dynamometer
- Gait
- Functional assessment
    - Sit to stand
    - Single limb stance (SLS)
    - Step Up, Step Down

TREATMENT RECOMMENDATIONS

- Edema/effusion reduction (including elasticized wrap/tubing)
- Activity modification
- Gait training with appropriate pre-operative assistive device, if needed
- Gait training with expected post-operative assistive device
- Balance/proprioceptive training, as able
- Basic home exercise program (HEP)
    - Ankle pumps, quadriceps sets
    - Straight leg raise progressive resisted exercises (PRE)- hip flexion, hip abduction, hip extension
    - Seated knee flexion and extension active assisted range of motion (AAROM)
    - LE flexibility exercises (e.g., supine calf and hamstring stretches)
    - Passive knee extension with towel roll under heel
    - Plantar flexion with elastic band or calf raises
- Stationary bicycle, as able

CRITERIA FOR ADVANCEMENT

- Patient demonstrates good understanding of post-operative plan of care
- Independent ambulation on level surfaces and stairs with appropriate assistive device
- Maximize range of motion (ROM) and flexibility in pain-free range
- Maximize strength prior to surgery

EMPHASIZE

- Familiarization with post-operative plan of care
- Quadriceps contraction

KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

Acute Care (Ambulatory Surgery): Day of Surgery

PRECAUTIONS

- Avoid excessive loading (i.e., standing, walking) and prolonged sitting
- Do not place a pillow under the operated knee
- Avoid premature discharge of assistive device - should be used until gait is normalized

ASSESSMENT

- NPRS
- Mental status: Alert and Oriented x 3
- Wound status
- Post-anesthesia sensory motor screening
- AROM/AAROM of knee
- Functional mobility

TREATMENT RECOMMENDATIONS

- Patient education on edema/effusion control and activity modification
- Transfer training
- Gait training with assistive device on level surfaces and stairs
- Initiate and emphasize importance of HEP
    - Quadriceps sets, gluteal sets, ankle pumps
    - Seated knee AROM/AAROM
    - Passive knee extension with towel roll under heel

CRITERIA FOR DISCHARGE

- Independent ambulation with appropriate assistive device on level surfaces and stairs
- Independent with transfers
- Independent with HEP

EMPHASIZE

- Independent transfers
- Gait training with appropriate assistive device
- Control edema/effusion
- AROM/AAROM (emphasize extension)
- Quadriceps re-education (quadriceps sets)

KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

Post-Operative Phase 1: Weeks 0-3

PRECAUTIONS

- Do not place a pillow under the operated knee
- Monitor response to load to avoid reactive pain or effusion
- Avoid premature discharge of assistive device- should be used until gait is normalized
- Avoid forceful PROM

ASSESSMENT

- LEFS
- IKDC
- NPRS
- Edema/effusion
- Patella mobility
- LE ROM and flexibility
    - Knee AROM/PROM
- Quality of quadriceps contraction (e.g., ability to perform straight leg raise without lag)
- Strength: MMT or handheld dynamometry
    - Hip & ankle
- Functional strength (e.g., squat, ability to ascend stairs)
- Gait
- SL stance
- Current activity level/demands on LE

TREATMENT RECOMMENDATIONS

- Emphasize patient compliance with HEP and ambulation with appropriate assistive device
- Gait training
- Patella mobilization
- LE flexibility
- Knee AROM/AAROM
- Hip progressive resisted exercises
- Strengthening: Closed chain exercises
    - Leg press, squat, forward step-up (FSU) progression
- Balance and proprioception training

- Modalities:
    - Quadriceps re-education
        - Neuromuscular electrical stimulation
        - Consider blood flow restriction (BFR) program with FDA approved device if cleared by surgeon and qualified therapist
    - For pain and/or edema as needed
- Stationary bicycle

CRITERIA FOR ADVANCEMENT

- Swelling and pain controlled
- Normal gait pattern without assistive device on level surfaces
- Full passive knee extension
- Passive knee flexion ≥ 120°
- Unilateral weight bearing on involved LE without pain
- Independent with HEP
- Ascend ≥ 6” step

EMPHASIZE

- Normal gait pattern
- Patient compliance with HEP and activity modification
- Control of pain and edema
- Total lower body functional strengthening

KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

Post-Operative Phase 2: Weeks 4-8

PRECAUTIONS

- Avoid pain with therapeutic exercise and functional activities

ASSESSMENT

- LEFS
- IKCD
- NPRS
- Swelling
- Patella mobility
- LE ROM and flexibility
- Knee AROM/PROM
- LE MMT or handheld dynamometry
- SLS
- Gait
- Function:
    - Ability and movement strategies: stairs, squats
    - Alignment and control with forward step down (FSD)
- Current activity level/demands on LE

TREATMENT RECOMMENDATIONS

- Patella mobilization
- LE flexibility exercises
- Progressive LE open kinetic chain exercises – isometrics to isotonics
- Functional progression of LE closed kinetic chain exercises:
    - Double leg squat to single leg squat and
    - Initiate FSD progression
- Proprioceptive balance training progression
- Progress HEP
- Cardiovascular endurance training (e.g., bicycle, swimming, elliptical when able to perform 8" forward step up)
- Initiate impact activities with progressive loading (e.g., anti-gravity or underwater treadmill, bilateral to unilateral)

CRITERIA FOR DISCHARGE (OR ADVANCEMENT TO PHASE 3 IF RETURNING TO SPORT)

- Minimal to no edema
- Full knee PROM
- Ability to ascend and descend 8” stairs pain-free with good control and alignment
- Independent with full HEP

EMPHASIZE

- Normalize flexibility to meet demands of ADL
- Eccentric quadriceps control
- Functional progression
- Establish advanced HEP/gym home program

KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

Post-Operative Phase 3: Return to Sport (Weeks 9+)

PRECAUTIONS

- Avoid too much too soon - monitor exercise and activity dosing
- Protect tibiofemoral and patellofemoral joint from excessive load

ASSESSMENT

- LEFS
- IKDC
- NPRS
- Flexibility
- Strength: LE hand-held dynamometry or isokinetic testing, if available
- Quantitative assessments for limb symmetry:
    - Hop Test
    - Star Excursion Balance Test
    - T-Test of Agility
- Functional assessment:
    - Access for movement strategy, control, alignment, deceleration and cutting:
        - Squat
        - Single leg stance
        - Forward step down
        - Single leg squat
        - Single leg bridge
        - Jumping and hopping
        - Deceleration and cutting

TREATMENT RECOMMENDATIONS

- Patient education regarding self-monitoring of exercise volume and load progression
- Collaboration with trainer, coach or performance specialist
- Advance LE strengthening
- Advance proprioceptive balance training
- Progress total body multidirectional motor control exercises to meet sport-specific demands
- Plyometrics progression
- Initiate return to running program when able to perform phase 2 impact without pain, reactive effusion or malalignment

- Sport-specific agility training
- Increase endurance and activity tolerance
- Sport-specific multidirectional core retraining

CRITERIA FOR RETURN TO SPORT

- Lack of pain, edema and apprehension with sports-specific movements
- Quantitative assessments ≥ 90% of contralateral LE
- Movement patterns, functional strength, flexibility, motion, endurance, power, deceleration, and accuracy to meet demands of sport
- Independent with gym or return to sport program

EMPHASIZE

- Incorporation of rest and recovery
- Self-monitoring of exercise volume
- Self-monitoring of load progression
- Speed and power
- Agility, change of direction and deceleration
- Collaboration with appropriate Sports Performance expert

KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

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Created: 9/2018
Revised: 9/2019, 10/2021; 8/2023