HaysMed

PCL Injury – Non-Operative

General Principles:
This protocol was designed to provide the rehabilitation professional with a guideline of care. It should be stressed that this is only a protocol and should not be a substitute for clinical decision making regarding a patient's progression. Actual progression should be individualized based upon your patient's physical examination, progress, and presence of any complications.

The non-operative protocol will also be used also for pre-operative treatment of PCL injuries.

NOTE: Protocol may need to be modified if multiple ligaments are involved.
Ligament testing should only be performed by the physician throughout the protocol.

PHASE I (Immediate)

Week 1 - 6

Orthotics-
1. Knee immobilizer only as needed
2. Hinged PCL brace for exercises and daily activity

Weight Bearing-
1. Progress as tolerated with normal gait

Modalities (PRN)-
1. Ice, Electrical Stimulation
2. Compression and elevation as needed for control of pain and swelling
3. Ice for 20 minutes follow exercises throughout protocol
4. May use electrical stimulation if needed for neuromuscular re-education
5. ASTYM as indicated to address soft tissue restrictions

ROM-
1. Wk 1-2: 0-90 degrees – ROM to be performed prone ONLY
   Wk 3-6: Progress gradually as tolerated
2. Take special care to support the tibia to avoid stressing the ligament

Exercises-
1. Quad sets
2. Knee extension stretch in prone – Avoid hyperextension
3. Straight Leg raises
   a. All planes (be aware if other ligaments are involved w/ PCL injury)
4. Hip abduction / adduction exercises
5. Isometric Quads at 60, 40, and 20˚ of flexion
6. Stationary bike when ROM allows
7. Core muscle training as indicated
8. NO isolated hamstring exercises

PHASE II (Intermediate)

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Week 7 - 12

Orthotics-

1. Continue use of hinged PCL brace at all times

Weight Bearing-

1. Should be progressing to full weight bearing as tolerated

Modalities (PRN)-

1. Continues Phase I modalities only as needed

ROM-

1. Full ROM, avoid hyperextension

Exercises-

1. Stationary bike when ROM allows
2. Shuttle / Leg Press (limited 0-70 degrees)
    a. Bilateral only
    b. Progress resistance as tolerated
3. Resisted Calf Raises
4. Closed Chain strengthening
    a. Bilateral squat progression (limited 0-70)
    b. Unilateral exercises (limited 0-30)
    c. Closed chain hip strengthening as tolerated
    d. Step ups / Step downs progression
5. Balance / Proprioception
    a. Bilateral progressing to unilateral
    b. Progress to eyes closed, unstable surface
6. Single leg deadlift with knee extended
7. Incline treadmill walking
8. Aquatics

PHASE III (Strengthening)

Week 13 – 18

Orthotics-

1. Continue use of hinged PCL brace for rehab and functional activities only
2. Discontinue use of brace for daily activity

Weight Bearing-

1. Full weight bearing as tolerated

ROM-

1. Maintain full active and passive ROM

Exercises-

1. Continue Phase II exercises as tolerated progressing resistance and repetitions
2. Begin isolated hamstring exercise, progress slowly
3. Lunge progressions (Split squat, forward, backward, walking)

(cont'd week 13-18)

4. Unilateral Leg Press / Shuttle
    a. Progress resistance as tolerated

5. Resisted Calf Raises
6. Closed Chain strengthening
    a. Bilateral weighted progressions can progress past 0-70
7. Single leg bridges
8. May begin jogging progression when good quad control

PHASE IV (Advanced Strengthening)

Week 19+

Orthotics-

1. Continue use of PCL brace for high risk activity and exercise until notified by physician

Exercises-

1. Progress Phase III exercises as tolerated
2. Initiation of sports activity
    a. Plyometrics
    b. Shuttle Bounding
    c. Sport-specific agility
    d. See Interval sport and Running programs
    e. DIME warmup
3. Criteria to be released for return to sport
    Lower extremity functional tests per physician request at 90% or better
    (See Lower extremity functional test protocol and form)
    ***complete form and return to physician**

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