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Harbin Clinic Orthopaedics and Sports Medicine
ACL Reconstruction
Post Operative Protocol

Phase I – Maximum Protection (Weeks 0 to 2):

0 to 1 Week:

- Brace – six weeks
- Use crutches weight 50% bearing x 2 weeks

Goals

- Reduce inflammation
- Normalize patella mobility with manual mobilizations
- full extension
- 90° - 100° of knee flexion, progressing to full as tolerated

Exercise progression

- Quadriceps setting using NMES as needed
- Multi-plane straight leg raising
- Gait training

Weeks 1 to 2:

Goals

- Reduce inflammation
- Full knee extension/hyperextension
- 100° – 120° of knee flexion, progress as tolerated

Phase II – Progressive Stretching and Early Strengthening (Weeks 2 to 6):

Weeks 2 to 4:

Goals

- Progress off crutches
- Full knee extension/hyperextension
- Knee flexion to 120°, progress as tolerated
- Normalize gait mechanics

Exercise progression

- Bilateral squat progression
- Multi-plane open and closed kinetic chain hip strengthening
- Step-up progression
- Stationary biking and treadmill/outdoor walking
- Deep water pool program when incisions healed; focus on ROM
- Proprioception drills

Weeks 4 to 6:

Goals

- Reduce inflammation
- Full ROM
- Normal gait

Exercise progression

- Leg press, hamstrings curls
- Increase intensity of stationary bike program, may add elevation to treadmill walking and elliptical
- Advance intensity of deep water pool program; focus on endurance training

Phase III – Advanced Strengthening and Endurance Training (Weeks 6 to 12):

Weeks 6 to 12:

Goals

- Full knee flexion and extension with terminal stretch
- Progressive strengthening
- Increase muscular endurance

Exercise progression

- Weighted squat progression
- Lunge progression (retro, walk and split) as indicated
- Controlled movement series

Weeks 8 to 12:

Exercise progression

- Outdoor biking – week 8
- Lateral lunge progression – week 8-10
- Shallow water pool running – week 8-10
- Swimming free style – week 8-10
- Backward elevated treadmill walking - week 8-10
- Basic ladder series – week 10

Phase IV – Advance Strengthening and Running progression (Weeks 12 to 24):

Exercise progression – weeks 12-20

- Progress resistance with squat and lunge strengthening program, may add leg extensions at 30° - 0° (exclude patients with patellar or trochlear groove chondral pathology)
- Linear running progression
- Advanced ladder series
- Basic plyometric box progression
- Fit functional brace

Return to Sport and Functional Drills Phase (Weeks 20 to 24)

- Interval golf program
- Advance ladder, hurdle and plyo box progressions
- Sport specific field/court drills with brace on
- Non-contact drills

Sports test and follow-up with physician

- Follow-up examination with the physician
- Sports test for return to competition at 6 months