Posterolateral Corner Injury Reconstruction Protocol

Initial Guidance:
Monitor for evidence of infection & distal neurovascular deficit (including DVT and acute compartment syndrome).

Restrictions:
Patient to remain in long lever brace locked at 0˚ for 6 weeks.
NWB for 6 weeks.
Avoid external tibial rotation and varus postures for 4 months.
Avoid open chain hamstrings for 4 months.

Immediately Postoperatively

Goals: Protection, control of pain and swelling/effusion, quads activation, preserve patellofemoral mobility.

- Long lever brace (locked at 0º), applied in theatre.
- POLICE protocol for management of pain and swelling/effusion.
- Gentle passive/active-assisted knee flexion and extension.
- Patella mobilisation (superior/inferior, medial/lateral).
- TAQ's, SLR in brace until no lag (30 reps 5-6x daily) for quadriceps recruitment. 10 seconds hold, 2-3 seconds rest til fatigue.
- **NWB for 6 weeks** to allow healing and prevent stretching of the graft from varus loads during ambulation.
- Avoid tibial external rotation or varus postures, knee hyperextension, resisted or repetitive hamstrings to avoid graft stretching.
- Limit knee flexion closed kinetic chain exercises to <70º knee flexion for 4 months.
- Driving: 1 week if non-pedal leg operated and driving an automatic car. If manual car or pedal leg operated 7-8 weeks, when impairments resolved and patient safe to brake.

1- 6 Weeks

Goals: 0-90º by 2/52 post-op, terminal extension and 120º by 6/52.

- Knee kept in full extension for 1-2 weeks then progressive ROM to stimulate collagen formation and alignment/modelling.
- Continue with patellar and tibiofemoral mobility exercises (avoiding hyperextension).
- Continue with SQ's and SLR in brace.
- NWB hip/lumbo-pelvic muscle maintenance exercises in brace.

7 - 12 Weeks

Goals: Restore FROM & start weight bearing ambulation.

- Open brace to allow FROM.
- Static bike no resistance (starting with 5 mins every other day, increase time as able).
- **Start PWB, WBAT from week 9** if no limp and able to SLR without lag.
- Proprioceptive ex's once able to FWB (progressing from double to single leg).
- **Flutter-kick swimming from week 8**, avoidance of breast stroke, side stroke and whip kicking **until 4/12.**

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12 - 16 Weeks

Goals: Restore normal ambulation & begin protected strengthening phase.

- Wean off brace as confidence allows from **week 12.**
- Single leg press <25% body weight to fatigue (<70º knee flexion).
- Squats initially <50% body weight (<70º knee flexion), increasing weight as able.
- CKC exercises: double to single leg as able (<70º flexion).

16 - 24 Weeks

Goals: Return to jogging and sport specific training.

- Brisk walking program (20 mins daily, add 5 mins per week).
- Add resistance to static bike aiming to fatigue the legs.
- **Start OKC hamstrings.**
- Increase weight bearing flexion to >70º flexion.
- Jogging once patient can walk briskly 3-5km over changing terrains without pain, and able to perform 20 single leg squats >60º flexion with sufficient control.
- Progress lunges from static to walking, add chop/lateral movements.
- Functional testing and training including timed balance, single leg squat for depth, single leg hop for distance, triple crossover hop for distance, timed hop for speed (6m).

7 Months +

Goals: Return to sport or physically demanding work if >90% limb symmetry index (LSI) for quadriceps strength, hamstring strength and hop battery tests.

- Build sports specific load regarding energy expenditure (aerobic, anaerobic) and surface (grass, court etc).
- Increase intensity of sport specific agility training.
- Increase difficulty of neuromuscular and perturbation training with single legged jumps and emphasis on sports specific movements.
- Restart training with patient's team.

References:

Lunden et al (2010) Current Concepts in the Recognition and Treatment of Posterolateral Corner Injuries of the Knee, Journal of Orthopaedic & Sports Physical Therapy. Vol: 40 (8), pp 502-515.