Post-operative evaluation, management and rehabilitation

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Immediate post-op assessment
1. Alignment
2. Patellar tracking
3. Tibial thrust
4. Flexion/extension

Post-operative radiographic assessment

Centre of the osteotomy
**Post-operative management**

**Acute Stage**
Surgery to toe touch (0-5 days)
- Cryotherapy
- Gentle PROM (10 repetitions, decrease if causing pain)
- (Robert Jones bandage ?)
- LASER / Acupuncture
- Pulsed Electromagnetic Therapy (PEMT)
- Two rooms downstairs
- Lead walks: toilet purposes only

**Sub-acute stage**
Toe touch to partial weight bearing (5 days – 3 wks)
- Ice/massage to decrease swelling
- Gentle PROM (10 reps)
- Patella mobilisations (care patella tendinopathy)
- Quadriceps/hamstring stretches
- Sit to stand in alignment
- Rhythmical stabilisations

**Sub-acute stage**
Toe touch to partial weight bearing (5 days – 3 wks)
- Increase weight-bearing through affected limb using treats to contralateral side of torso
- Proprioceptive work using unstable base
- Slow lead walks: 10 minutes tid
- Neuromuscular electrical stimulation (NMES)
- LASER / Acupuncture

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Intermediate Stage (3-6 weeks)

- Lead walk: 15 mins at 4 wks, 20 mins at 6 wks, X-ray before further progression
- 3 leg standing (lift up contralateral FL)
- 2 leg standing (place FL onto a step); low step initially increasing height gradually
- Para standing: Lift up diagonal pair of limbs on the animal’s good side
- Proprioceptive training: weights on unaffected limb to increase WB through affected limb

Intermediate Stage (3-6 weeks)

- Gradient work
- Supervised steps (care patella tendinopathy)
- Walking in circles
- Proprioceptive work using wobble cushion
- Pole work: Stepping over pole to increase flexion
- Water treadmill work to assist with quadriceps strengthening

6 week re-examination

- Gait
- Limb alignment/conformation
- Palpation
- Manipulation
- Radiographic assessment
Palpation/Manipulation

- Patella
- Straight patellar ligament
- Axial alignment / torsion
- Cranial tibial thrust

Radiographic assessment

Post-op

6 weeks post-op
Clinical expectation

- Video

Lameness grades of treated dogs pre-operatively and at 6 weeks and 5 months post-operatively
Physical therapy and rehabilitation


Post 6 week assessment (6-9 weeks)
- Lead walks 3 x 30 minutes daily increasing in 10 minute increments each week
- Trotting in straight lines and figure of eight
- Stairs (care patella tendinopathy)
- Hemi standing
- Trotting over poles
- Stepping over wide jump to get stifle to flex and fully extend
- Swimming

Return to Play (9-12 weeks)
- Leg Weights
- Trotting with changes of direction
- Hemi hopping
- Walking forward with good HL raised
- Dancing on hind limbs
- Running straight off lead work. Preferably the dog should be walking for up to one hour before off lead work begins.
- Palpate for thickening of patella tendon and introduce raised poles

Range of Motion
- Kinematic gait analysis has demonstrated an improvement in the active range of motion improvement from a relative flexed (106°-132°) to a more normal, extended position (113°-143°). Passive full range of motion appears unaffected by TPLO. (relatively little peri-articular fibrosis is seen post-operatively)
Suboptimal return to function following TPLO

- Implant related problems
- Late medial meniscal injury (meniscal release)
- Poor limb alignment
- Osteoarthritis
- Synovitis
- Lateral injury damage