ADVANCED VETERINARY SURGERY

Discharge Instructions Following Proximal Tibial & Tibial Tuberosity Physeal Fracture Repair using Kirshner Wires

Surgery was performed today to repair a fracture of the proximal tibial, tibial tuberosity growth plates and the fibula (shin bones). The bones were aligned and repaired using a K-wires (metal pins), which will hold the bone in position and prevent further displacement until the bone gradually repairs and increases strength. The implants are strong, but not strong enough to tolerate an unrestrained, active dog's normal behaviour, so extreme care will need to be taken especially during the first 6 weeks. A patient should feel more comfortable following stabilisation and pinning the fracture and may want to use the leg beyond what it is able to tolerate, risking major complication. *It is your job to ensure this does not occur.*

Bone healing and fusion will take approximately 6-8 weeks, during which time it is imperative to ensure there is adequate rest to allow the bone to heal without placing too much strain on the metal implants and the weakand healing bone.

The implants may remain in place for life if they do not cause irritation to the bone or soft tissues or develop an infection, but may occasionally require removal if there are concerns.

The pinning will be supported in the early period using an external splint applied to the leg for 2-3 weeks depending on the patient's nature and ability to rest. The bandage and splint will need to be changed after 7 days,thenremoved 1-2 weeks later, to ensure there are no developing pressure sores or rub marks and wounds. There should be a gradual and progressive improvement in weight bearing on the operated leg in the coming weeks, with toe-touching occurring following splint removal.

Should there be any deterioration in the use of the leg at any stage, please contact your veterinarian for a routine follow-up examination. Review by Advanced Veterinary Surgery will be performed if required.Mild to moderate swelling around the ankle and foot should resolve in the following 1-2 weeks. Massage and ice-heat therapy will aid this.

There is a surgical wound on the inside of the shin, with sutures being used to hold the skin edges together. The sutures will either be through the skin, and require removal in 14-21 days time, or buried under the skin surface and not require removal.An Elizabeth collar may be required should there be any signs of attempting to lick at the bandage or foot, and each patient will be different. Please request a collar from the clinic staff if you think your pet will attempt to lick at the foot. Licking is a very easy way to introduce infection and cause bandage complications and should be avoided at all cost.

Re-examination

Several routine examinations are advised in the early post-operative period to monitor for any signs of infection or complications with the bandage.

DAY 7:	Bandage and splint change, wound examination and fentanyl patch removal.
DAY 14-21:	Bandage and splint removal.
WEEK 4:	Progress assessment, sedation and Xray of the implants to assess bone healing.
WEEK 8-12:	Final progress assessment.

Please fast your pet prior to these appointments in case sedation is required.

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Medication

A course of antibiotics and anti-inflammatory medication will be dispensed. Please follow the label instructions carefully and contact your veterinarian should you have any queries. Should there be any gastrointestinal signs (vomiting, diarrhoea) please stop the medication and contact your veterinarian for further advice.

Rehabilitation

These are only meant to be guidelines and each patient's recovery is different.
As the owner you are the brains of the recovery and rehabilitation, as our patients will want to run before they can crawl, and risk injury to the healing bone and set-backs to the recovery.

WEEK 1+2
Toe touching to the ground, but should be improving small amounts daily and using the splint.

Strict Rest and Confinement or Strict Supervision.

Short walks on a lead out to the backyard for toileting purposes only 2-6 times daily.

On-lead at all times / No Stairs No jumping No swimming and No baths whilst splint is in place

Heat packs may be applied to the thigh, hip and knee 2-4 times daily for 20-30 minutes to help minimise secondary muscular spasm due to abnormal weight bearing and improve circulation and healing. Ensure the heat pack is not too hot as to burn the skin but should be comfortably warm.

WEEK 3+4
Progressively improving weight bearing on the leg following splint and bandage removal.
Intermittent Limping or Carrying the leg may be noted.

Strict Rest and Confinement or Strict Supervision.

Short walks on lead in the backyard for 2-5 minutes, up to 2-6 times daily. If your pet limps more towards the end of the walk reduce the length of walk to a point which is well tolerated.
Slow walks to encourage the use of the leg and placing correctly on the ground*.*

On-lead at all times/ No Stairs No jumping / Allowed baths.

Range of motion exercises may be performed following splint removal 2-4 times daily. With the patient lying with the operated leg upper-most, and supporting the leg, hold the kneeand ankle joints, and gently bend and extend each joint in turnfor 10-20 repetitions each.

Heat pack application to the thigh,knee, shin bone and ankle joints for 20 minutes 2 times daily.

WEEK 5-8
Progressively improving weight bearing on the leg with occasional limp.
Intermittent non-weight bearing (Carrying the leg) may be evident.

Confinement or Strict Supervision.

Gradually increase the length of ***lead controlled walks***, 5-10 minutes, up to 2-6 times daily. If your pet limps more towards the end of the walk reduce the length of walk to a point which is well tolerated for a few days then increase again gradually.

On-lead walks in chest deep water will encourage muscle building and knee stability. Avoid soft sand and beaches though.

On-lead at all times/ No Stairs No jumping

Range of motion exercises and Heat pack application.

WEEK 8-10
Good weight bearing on the leg and improving stamina on walks.

Supervision.

Lead controlled walks, Start at 10 minutes then gradually increase up to 40 minutes, up to 2 times daily.

On-lead at all times / No Stairs No jumping / Hydrotherapy and Swimming

WEEK 10+
Good weight bearing. Gradual reintroduction to some gentle off lead walks and increasing on-lead walks.

Lead controlled walks, 30-40 minutes, up to 2-4 times daily.
Gradual reintroduction to short periods of supervised, gentle, off-lead activity 5-10 minutes.

Every patient is different and each recovery will and outcome will vary.
Take your time and try not to rush back to normal as there is a lot of healing required by the joint.

LONGER TERM

The prognosis is good to excellent, with the majority patients returning to normal athletic activity.

The development of bone growth and developmental problems associated with injury to the growth portion of the bone will need to be monitored for in the coming months.