

Disch Date:

SEP 11, 2015

Instructions Date: SEP 13, 2015

Detailed Care Instructions

Thank you for bringing Loki to the University of Minnesota Veterinary Medical Center Surgery Service. Below is a summary of his visit.

DIAGNOSIS:

- 1) Congenital bilateral laryngeal paralysis left cricoarytenoid lateralization 6/5/15
- 2) Hypoplastic trachea
- 3) Pectus excavatum and carinatum
- 4) Bronchomalacia with bronchial collapse
- 5) Questionable cardiomegaly
- 6) Left elbow varus, carpal valgus suspect premature closure of the left distal ulnar physis
- 7) Bilateral stifle varus, tarsal valgus with rotational abnormalities
- 8) Mandibular prognathism

PRESENTING COMPLAINT: Reevaluation of angular limb deformities

HISTORY: Loki a 1.3 year old male neutered mix breed was presented for an reevaluation of his angular limb deformities. Loki is currently being fostered. On 6/5/15 he had a left cricoarytenoid lateralization performed for congenital bilateral laryngeal paralysis. Since his surgery in his respiratory difficulty/effort has improved, but is exacerbated in times of excitement or exercise. Loki will get cyanotic when very excited, but once removed from the situation he returns to normal. He is doing well otherwise.

PHYSICAL EXAMINATION FINDINGS:

BAR. MM pink and moist. CRT <2sec. EENT: mandibular prognathism. Auscultation is difficult due to inspiratory stridor, but normal brochovesticuar sounds and no murmur ausculted.

Orthopedic examination.

No lameness noted, circumduction of the left elbow. Left thoracic limb - elbow varus, carpal valgus, decreased range of motion in the left carpus and left elbow. Slight pain on flexion of the left elbow. Pelvic limbs Stifle varus, tarsal valgus +/- rotational abnormalities. .

DIAGNOSTIC TESTS: None

TREATMENT/PROCEDURE PERFORMED: None

DISMISSAL INFORMATION:

Angular limb deformities (ALD) can be the result of trauma, nutritional disorders, or perinatal causes. Today we reevaluated Loki's angular limb deformities. His left forelimb is most severely affected, but at this time he does not appear to be clinical (lame or painful) on that limb.

The goals for treatment of ALDs is to alleviate pain, correction of angular and rotational malalignment, and to prevent further deformity and treatment of any limb shortening.

Satisfactory correction of angular limb deformities is entirely dependent on accurate presurgical planning very precise imaging. Radiographs are the most common modality used, but the CT scan has been used with more frequency to account for other abnormal angles in the bone not seen on radiographs. From the imaging several measurements would be taken and cuts would be made into Loki's bone to enable realignment. A combination of plates, pins or wires would be used to hold the bone in place while it heals at its new angle. Healing of his bone could take up to 8-12 weeks and he would need to be under strict rest for the duration of healing. There is significant care that would need to undergo during the healing process to prevent any complications, some of which can be devastating and require multiple surgeries. Complications include infection, implant failure, delayed healing, lameness despite correction and osteoarthritis.

We discussed several options for Loki;

1) Angular limb deformity correction - Since his left thoracic limb is most severely affected and this would likely be the one we would start with. Initial steps would involve precise radiographs and/or CT to evaluate the degree of deformity under heavy sedation or general anesthesia. Since Loki has other confounding health concerns he is a very high risk anesthetic candidate. Anesthetizing or sedating Loki for this procedure could exacerbate his conditions and significantly risk his life.

2) Conservative management: No radiographs or surgery is performed. We suspect that Loki has early osteoarthritic changes in his left elbow and left carpus, since currently he is not clinical (no lameness), later in life (months to years) he could begin to show lameness in his limb. Since Loki is a such a high anesthetic risk choosing this option would be very reasonable. His osteoarthritis and future clinical signs could be managed with conservative management (listed below)

MEDICAL MANAGEMENT OSTEOARTHRITIS

- Weight control: Maintaining a healthy weight may be the most important element in assuring the best possible quality of life for a dog with osteoarthritis. Body weight increases the load on all joints and causes more rapid progression of the degenerative changes, resulting in severe pain and inability to tolerate even non-strenuous physical activity. Loki is at a good weight right now.

- Low impact activity: The most common high impact activities are running, jumping, fetching, and rough playing with other dogs. These should be minimized. Daily leash walks are encouraged, but should be at a slow pace. These walks should be short and multiple times a day rather than a long walk once a day. The goal of physical activity is to maintain good muscle mass and prevent muscle atrophy while protecting the articular cartilage of the joints. Physical therapy and rehabilitation are also good options in helping severely affected dogs regain range of motion and function in unstable and arthritic limb.

- Joint specific diet: Specific "joint protective" canine diet formulations are available for purchase through your veterinarian. It is our observation that dogs fed these diets have significantly less clinical signs from chronic arthritis than dogs on regular maintenance diets. These diets have a favorable ratio of omega-3 to omega-6 fatty acids which may decrease inflammation in the joints. Examples of such diets include Hill's Science Diet J/D and Purina JM.

- Joint supplements: Omega-3 fatty acids are a natural, scientifically proven anti-inflammatory in dogs. Fish oils are a good source of omega-3 fatty acids and Loki may benefit from this supplement. He should receive 40 x kg mg EPA and 25 x kg mg DHA. You can check the label for the milligram (mg) content of each form of the fish oil on over the counter products. There are also concentrated formulas that are specifically made for dogs. Please let us know if you would like to purchase a concentrated form of omega-3 fatty acid supplement. Glucosamine and Chondroitin sulfate (i.e. "Cosequin") are normal constituents of articular

cartilage that can be administered as dietary supplements (nutraceuticals). These supplements are thought to decrease the inflammatory mediators released within a joint in active osteoarthritis, however, there have been no scientific studies that have proven the efficacy of these supplements in dogs. If Loki is on a joint diet then these additional supplements are not necessary.

- Non-steroidal anti-inflammatory drugs (NSAIDs): You may give prescription NSAIDs to Loki to improve the level of comfort and allow wider range of motion of the affected joints if he becomes clinical for his angular limb deformities. Examples of these medications include firocoxib (Previcox), tepoxalin (Zubrin), carprofen (Rimadyl), meloxicam (Metacam), or deracoxib (Deramaxx). Side effects of NSAIDS can include vomiting, diarrhea and GI ulceration (dark, tarry stool). If any of the signs develop, discontinue the medication and call your veterinarian.

Continued monitoring:

Please continue monitoring Loki for signs of respiratory distress - unrelenting anxiety, gasping for breath, bluish tinged to his gums or tongue or collapse. All of these could be signs of an emergency and Loki should be reevaluated by a veterinarian immediately.

Please continue following the previous discharge instructions related to his laryngeal paralysis.

Prognosis: fair to poor considering several congenital conditions.

Thank you for entrusting us with Loki's care. We know he is a special family member and we appreciate your confidence and trust in allowing us to care for him. He is a sweet boy and was a pleasure to work with. Please do not hesitate to contact us at (612) 626-8387 if you have any questions or concerns.

Primary or Attending Clinician (Primary Contact): Ruth Scott, DVM Small Animal Surgery Resident Email: rmscott@umn.edu

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