

Success Story: Sasha

Sasha, a 10-month-old female spayed Alaskan Malamute, arrived at the surgery service for evaluation of limping in the right thoracic (front) limb.

Two weeks prior, she had jumped and landed on her thoracic limbs. She cried out when she landed and initially seemed to be in pain, which ceased until her owner noted her limping seven days before coming to the surgery service. Her primary veterinarian, Dr. Robin Lovelock of Fairview Veterinary Hospital, saw Sasha for the limping and recommended Sasha take anti-inflammatory medication and get rest.

Sasha improved slightly but then slipped in the yard and became non-weight bearing in the right thoracic limb. Dr. Lovelock re-evaluated Sasha, performed radiographs (x-rays) of both thoracic limbs, and then referred her for surgery at Veterinary Specialists of Rochester.

On examination at VSR, surgeons noted Sasha had moderate carpus valgus (wrist turned outward) of the right thoracic limb, which was suspected to be due to early closure of the growth plate of the distal ulna and partial early closure of the distal radius growth plate. Angular limb deformities (abnormal angle of the limb) are often caused by premature closure of a long bone growth plate and most commonly occur in the radius and ulna followed by the tibia. The lower aspect of the front limb is made up of two side-by-side bones: the radius and the ulna. When a dog is growing, these bones need to



grow at the same rate so the leg does not become angled. If a growth plate of one of the bones closes and the other bone continues to grow, the limb will become angled. Angular limb deformities are problematic because they put abnormal weight bearing on the joints, leading to arthritis over time.

Depending on the severity of the angular limb deformity, surgery is recommended. The type of surgery performed is based on the amount of growth left in the patient and also the severity of the angulation. Also, in patients that still have significant growth left, it is not uncommon to require more than one surgery.

Because Sasha already had a significant deformity and still had growth left, veterinarians recommended surgery, which the owners opted to pursue. At surgery, Sasha had a ulnar ostectomy to remove the closed ulnar growth plate. Since it was unclear from radiographs if part of the growth plate of the radius was closed, the medial (inner) aspect of the radial growth plate was surgically shut down to allow the lateral (outer) aspect to grow, providing a straightening effect or arresting the deformity's progression.

Three weeks after surgery, Sasha's owners observed a worsened lameness after her housemate jumped on her. On examination, veterinarians found a strain of the medial collateral ligament, and now, in addition to the carpus valgus, Sasha had significant bowing of the radius. Based on these findings, surgery service veterinarians recommended Sasha have a second surgery, which was performed once she was more fully grown. Surgeons removed a piece of the radius to correct the angulation (cranial bowing and carpus valgus) and placed a bone plate to hold the remaining cut ends of the radius together.

Postoperatively, Sasha did well. Six weeks after surgery, radiographs showed advanced healing of the radius. A splint was kept in place for the first six weeks post-op, which was transitioned to a soft padded bandage and removed at 7 weeks post-op. Sasha is now seven months post-op and is doing great on the limb. She is back to playing with her sister and running around. For the first time, she is preparing for pulling sleds this winter.

Angular limb deformities bring very unique conditions for each specific patient and can often require advanced surgical treatments. They can be frustrating conditions because it can be difficult to determine how the deformity will affect each patient and to what extent of treatment they will require until they are fully grown. They require a strong dedication and commitment from the owner, with which they will enjoy successful outcomes.

