Assessment of Distress based on Physical Exam Findings and Witness Accounts

DATE: December 19, 2017

Case number: MVL12345
CPS Case Number:CA19234567
CHS Case Number:2345c
CHS Animal Number: A4345601

_____
Margaret Doyle
BSc., MVB (Hons), Cert Vet Forensics, MSc., MRCVS

Contact: Detective Doe
Calgary Police Service
5111 – 47 Street NE
Calgary, AB T3J 3R2

Case Summary:

On December 19th 2017 I was asked to examine a dog that was allegedly beaten with a wooden stick, punched and kicked. I was provided with a photograph of the stick for evaluation along with the animal. It is my opinion that being stuck with the stick photographed, by an adult, would cause pain to an animal regardless of the area struck. Being punched and kicked would also undoubtedly cause pain.

This dog was found to have a ruptured cranial cruciate ligament on his right hind. This type of injury can be caused by blunt force trauma to the limb but can also result from accidental causes. Regardless the cause, this dog would have displayed lameness that should have prompted his owner to seek veterinary advice. The injury ideally requires surgical repair but at the very least, it requires medical management to ensure the dog is not in pain.

Subject of Exam: Examined is a 5 year old (estimate based on dentition) male neutered, pit bull type dog with permanent identification in the form of a microchip #

Medical History: No medical history is provided

Radiographic Assessment:
Full body show fracture of tuber ischii of the right side of the pelvis. Two flexible plates are affixed to the lateral aspect of the distal femur with screws. One screw is broken but still within the cortex. A rigid plate is affixed to the medial aspect of the tibia with screws distally and proximally and circlage wires centrally. Compression of the fat pad of the stifle on the right is noted as well as roughening of the fabella and osteophyte formation on the medial and lateral tibial margins.

Physical Exam Findings
EYES: Normal
EARS: Short crop, clean, no OE
MOUTH/TEETH: Grade I dental disease
MUCOUS MEMBRANES: pink/normal CRT
HEART/LUNGS: Normal auscultation, no murmur, no arrhythmia
ABDOMEN: Normal, no pain, no organomegaly, no free fluid
UROGENITAL: Normal external exam
LYMPH NODES: Palpable LN's are normal
MUSC/SKELETAL: Right stifle thickened, patellar effusion, medial buttress, crepitus and palpable cranial drawer. Mild lameness right hind.
BCS:6/9 (Laflamme)
HYDRATION: appears normal

NEURO: Normal
SKIN: Poor quality coat, diffuse to coalescing patchy alopecia over trunk with broken and coarse hair. Thin line of alopecia along left dorsal thorax and abdomen. Scar along lateral aspect of right femur from hip to distal to the stifle.

Blood and urine collected for total body function. Results pending

Assessment: Historical surgical repair of right tibial and femoral fractures. Fracture of tuber ischii may have been coincidental with previous limb fractures and has formed a non-union or may be more recent. Cranial cruciate ligament rupture right stifle.

Plan: Gave 0.1mg/kg metacam SQ. Pending blood work this dog will need to be continued on pain medication and surgical repair of cruciate will need to be considered though it would be more involved in this dog than normal due to the presence of plates already on the limb.

Interpretations:

I have no doubt that the stick photographed, swung by an adult, would cause pain in a dog regardless of where the blow landed. Being struck with a fist, or kicked, also by an adult, would absolutely cause pain. Allegations of abuse were historical in this case but even had they been recent it's not surprising that bruising or fractures were not seen on physical exam.

Being struck with a fist, a foot, or the stick photographed, would be expected to cause subcutaneous bruising at the time of injury, the extent of which would depend on the site of the blow, the force of the blow and the relative vascularity of the tissues involved. Pain and duration of distress associated would depend equally on the same factors. Subcutaneous bruising can be nearly impossible to see in an animal with fur (Merck; McGavin and Zachary; Thomson et al.) even thin fur as was seen in this dog due to pigmentation and coat color. Frequently the extent of bruising can only be seen post-mortem by skinning an animal, which is not possible with a live victim.

Though no external wounds were seen on the dog when it was examined it would be highly unlikely for blows with a fist, a foot, or the stick in question to result in a laceration. The stick was thin enough to have slightly elastic properties. Combined with rounded edges, it would not produce enough shearing in the tissue to cause an open wound, but instead flexing and causing subcutaneous damage. Punches and kicks are equally unlikely to cause lacerations that would leave more lasting evidence.

This dog had had surgical implants in his right hind leg that are consistent with fracture repair of the femur and tibia alleged to have taken place 4 years ago after being hit by a car. He was found to have a fracture of his pelvis that shows no callus formation meaning either it is a historical fracture that has not healed, healed in a non-union, or it's a fresh fracture. Previous radiographs would confirm if this fracture occurred at the same time as the femoral and tibial fractures.

This dog was found to have a ruptured cruciate ligament on his right hind limb. It is unclear when this rupture occurred. Minimal arthritis formation at the site suggests it was not coincidental with the trauma that resulted in the femoral and tibial fractures. A ruptured cranial cruciate ligament in a dog this size is a surgical condition. They cannot be well managed with medication. This case is slightly more complicated than most because of the implants already in the right hind limb. The most common surgical repair would be a tibial plateau leveling osteotomy but would require removal of the bone plate

already present on the tibia prior to osteotomy. Until this procedure, or another salvage procedure is performed, this dog requires pain medication to alleviate pain associated with the ligament rupture. Ideally this is a non-steroidal pain medication to mitigate inflammation as well as pain. This injury would have been apparent to the owner as lameness on the right hind and was likely acute in onset. It is possible that a blow to the limb may have resulted in the rupture, but accidental causes are equally probable. Regardless, veterinary advice for the injury should have been sought.

****I reserve the right to make changes to this statement should new information be provided****

Works Cited

Laflamme, DP. "Development and Validation of a Body Condition Score System for Dogs." *Canine Practice* 22.July/August (1997): 10-15. Print.

McGavin, M. Donald, and James F. Zachary. *Pathologic Basis of Veterinary Disease*. 4th ed. St. Louis, Mo.: Mosby Elsevier, 2007. Print.

Merck, Melinda. *Veterinary Forensics : Animal Cruelty Investigations*. 1st ed. Ames, Iowa: Blackwell Pub., 2007. Print.

Thomson, R. G., et al. *Thomson's Special Veterinary Pathology*. 3rd ed. St. Louis: Mosby, 2001. Print.