



LAKE SHORE
VETERINARY SPECIALISTS
&
EMERGENCY HOSPITAL

PORT WASHINGTON 262.268.7800 • RACINE 262.554.5344

www.LakeshoreAnimalHospital.com

GUNSHOT WOUND

What is it? Gunshot wounds are the most common projectile injury seen in veterinary medicine. Statistically 26% of gunshot wounds seen penetrate the thoracic cavity while 16 % penetrate the abdominal cavity. Gunshot wounds can occur when private citizens deliberately shoot a cat or dog, a firearm mishap occurs and an animal is accidentally shot, or when there is a police involved shooting.

What animals are affected? Both dogs and cats can suffer from gunshot wounds.

What are the clinical signs? The first clinical sign of a gunshot wound is hemorrhage from the wound site. If the gunshot penetrated the chest cavity, respiratory distress or difficulty is the most common sign. If the gunshot penetrated the abdomen, a large volume of hemorrhage may be noted with or without respiratory distress. Regardless of the location of the entry wound, animals will usually present in varying degrees of shock exhibiting weakness, pale gum color, and sometimes slightly dull mentation. Pain is always present in varying degrees of severity dependent upon the location of the wound and amount of damage the bullet caused both with the initial laceration as well as the subsequent crushing and bruising injuries to adjacent tissues.

How is it diagnosed? Diagnosis starts with obtaining a detailed patient history from the owner. Sometimes the owner witnesses the shooting, while other times animals return home with wounds that are suspected to be gunshot wounds. In almost all cases, an x-ray will confirm if a pet has been shot. As with penetrating wounds from other causes, a complete physical exam will be done on the patient. Full vital signs including temperature, pulse rate, and respiratory rate will be obtained. The doctor will carefully listen to the patient's heart and lungs for disruptions in normal heart rhythm and abnormal breath sounds. If the gunshot wound is to the head or spine, a neurological examination of the patient will occur to check pupil size and responsiveness, and to look for tremors, head bobbing, and ability to balance, stand, walk or other neurological abnormalities.

How is it treated? Treatment begins at home. Place direct pressure on any bleeding wounds with a dishtowel or other small cloth and immediately transport your pet to the nearest veterinarian or emergency facility. Shock will be addressed at a veterinary hospital with appropriate fluid therapy and oxygen supplementation. Pain will be controlled with injectable pain medication. Blood pressure will be monitored and maintained with appropriate fluid therapy. Blood or blood products will be administered as needed to replace losses. Damage to the large blood vessels of the chest cavity can cause a hemothorax (free blood in the chest cavity). When the lungs and/or the space around the lungs fill with any type of fluid, it makes breathing very difficult. Alternatively pneumothorax (free air in the chest cavity) can occur if the bullet penetrated the chest cavity but missed the large blood vessels. If either of these is present, the chest cavity will be tapped by the veterinarian to evacuate the free blood or air. With any kind of penetrating traumatic wound to the thorax or abdomen, it is always recommended to surgically explore the wound and repair any trauma that was caused. Injury can be caused by the initial passing of the bullet as well as crushing, shearing, and bruising injuries to adjacent tissues that may be worse than the bullet wound itself. Tearing to the blood vessels or organs must be corrected. Without full surgical exploratory, these additional injuries can not be adequately repaired. Statistically, 40% of gunshot wounds to the abdomen result in septic peritonitis. Incidence of peritonitis can be reduced with surgical

exploration of the wound, adequate flushing of the abdominal cavity, and appropriate antibiotic therapy. If the bullet impacts a bone, splinting or casting or surgery may be required to fix these injuries separately.

What is the aftercare? Aftercare is dependent upon the number of wounds, location of the wounds, and amount of damage to surrounding tissue and organs caused by the passing of a bullet into the body. Antibiotic coverage will need to be continued at home as well as pain control. Administer all medications as directed by the prescribing veterinarian. Incisions will need to be monitored as they heal for redness, swelling, or discharge. An e-collar may need to be worn by your pet to keep them from chewing out their sutures or licking their incisions and causing infection. Bone damage may be supported at home by a bandage or splint, which will have to be monitored to ensure it is staying in place as well as kept clean and dry. Repeat radiographs or ultrasound may be needed after the pet has been home for a period of time to assess wound healing.

What is the prognosis? Prognosis is dependent upon the number of wounds, location of the wounds, and the caliber and type of firearm used to inflict the wounds. Wounds from high caliber weapons fired at close range and entering the body in the head or chest have a higher rate of mortality than low caliber weapons firing at long range and entering the body in a less lethal area. Also animals that sustain multiple gunshot wounds are at higher risk for mortality. Animals with bullets that penetrate the skull or spine have a higher incidence of mortality as well.

Can it be prevented? YES!!! Keep cats indoors to prevent private citizens from shooting them when they wander onto their property. Keep dogs on a leash or in a fenced in yard. Socialize your animals so that they can interact in an appropriate and social manner with people they just met.