

Review Article

First – Aid in Veterinary: A Review

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Introduction:

In veterinary practice first-aid is very important for saving the life of animals. First-aid is the initial treatment given to the animal till we are approaching to a veterinarian or a veterinary hospital for appropriate treatment. It can also define that “The initial administration of care of an injured animal until more thorough veterinary attention can be sought.” There are number of reasons and emergency conditions for which the first – aid provided to the animals. However, there are some emergencies in which first – aid is required to the pets or other animals. Few of the emergencies which may threaten the life of our pets or other domestic animals, are listed here.

- Dyspnea
- Automobile Accident
- Fracture
- Hemorrhages
- Cardiac Arrest
- Shock
- Seizures
- Toxicity or poisons
- Heat stroke
- Burn

Points to be consider in emergencies

- First of all, we should not be panic from the prevailing or existing situation.
- Then we have to call our veterinarian.
- Till the arrival of our veterinarian, we people have to do certain things.
- The name, mobile no and address of veterinarian should be kept at ready hand.

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- There is an emergency first – aid kit, which may have different things that include –
 - Adhesive tapes
 - Blankets
 - Blunt end scissors
 - Wound wash
 - Antiseptic solution
 - Cotton bandage

Now we will discuss that what things, we have to do in different types of emergencies -

Dyspnea

Dyspnea means difficulty in breathing. This may be due to cardiopulmonary arrest. When there is cardiopulmonary arrest, we people have to perform cardiopulmonary resuscitation (CPR). There is ABC of CPR.

A stand for patent airways

B stands for breathing &

C stands for circulation

First of all, we must have to see that, the respiratory tract should be clear. There should not be any type of obstruction in the respiratory tract. When the animal is of cooperative nature then we can remove the foreign bodies with the help of tweezer or plier easily. The tongue of the animal is gently pulled forward to locate the foreign body in the mouth. If the foreign body is lodged in the mouth or trachea or esophagus forceful attempt to remove it should be avoided because it may aggravate the condition. We can provide rescue breathing. In that the mouth of the animal closed and by making funnel of our both hands on the nostril of the suffering animal, we have to blow air on the nostril so that the respiration can be normally started. Antibiotics and bronchodilators such as theophylline can be used immediately if available to prevent bronchospasm (Wong, 2006 and Zhu, 2015).

Automobile Accident

If you come across an animal that has met with road accident, here are some initial things that you could do to keep the animal comfortable and free from stress.

- Place the animal in a cool, well-ventilated place or a shaded area under the tree.
- Give small amounts of cold-water containing glucose or sugar frequently.
- Ice packs should be applied on the head, forehead and all over the body. If you cannot get ice, use cold towel press it on the head and chest of the animal.
- If bleeding is profuse, apply some pressure at that site to minimize blood loss and prevent the animals to go in hypovolemic shock.
- Once first aid has been administered, and the animal is stable, consult a vet.

Fracture

Fracture is one of the most common emergencies in veterinary field, in which first-aid may be required. Most fractures resulting from direct trauma are either comminuted or multiple (Brinker, 1974). At the fractured site first of all hemorrhage must have to be controlled. Then the fractured site should be handled as less as possible, so that there will not be more damages to the tissues in the vicinity of the fracture. Since it is important to immobilize the fracture to prevent reinjure of the trapped nerve or injured blood vessel (Ellsasser, 1975). Moreover, homemade splints can be applied, till the arrival of a veterinarian or we are approaching to the veterinary hospital. It is important to remember that the entire animal may need treatment, as well as the fracture.

Hemorrhage

Hemorrhage is the leading cause of morbidity and mortality in surgery and trauma patients (Nunez, 2009). Hemorrhage may be internal or external. Immediate steps must be taken to check hemorrhage. There are number of techniques or methods, which can be adopted to check the hemorrhage. First of all is the digital pressure. In this method we have to keep pressure of our fingers or palm on the bleeding artery or vein or at the site of hemorrhage. Capillary blood is the most common and is slow due to the blood vessels being under low pressure. Pressure bandaging is also one of the methods for controlling hemorrhage. As far as the first – aid is concerned, we can apply tourniquet above the affected region. But this tourniquet should be kept loose after every 20 minutes for 2-3 seconds.

Cardiac Arrest

If there is stoppage of the heartbeat, then we can massage the heart of the pet or other animal with our hand. But here again we have to kept in mind that there should not be massage of the heart as well as rescue breathing simultaneously. These methods should be performed alternatively one after the other.

Shock

In case of the shock, the primary cause of the shock should be removed. There are number of classes or types of shock. The shock may be hemorrhagic, vasogenic, septic, anaphylactic & neurogenic. Shock is a result of a collapsed circulatory system that can happen due to stress, blood loss, fluid loss, low blood pressure and damaged heart. Many animals which are badly injured show sign of shock like, rapid pulse and breathing, hypothermia, pale / white gums, animals may shiver & birds fluff their feathers, an animal in shock is usually still, quiet and cold. The animal's eyes should

be covered in order to reduce stress. Any visible signs of bleeding should be stopped. Animal should be kept in warm & quiet place. Oral fluid should not be given to animals in shock. Once the animal has warmed up, warm fluid can be given. The fluid therapy should be provided in the shock. When there is electric shock, we people must be assured that there should not be electric or power supplied to the suffering animal.

Seizures

It is also one of the emergencies in which first – aid is required. We must take into consideration that the animal or pet who is suffering from the seizures should not collapse on the furniture or any other object nearby. The seizures or fits will last for 2-3 minutes. Seizures may be due to poisons or ingestion of toxins.

Toxicity

Poisons can be swallowed, inhaled or absorbed through the skin. Poisoning of native animals generally occurs through ingestion of the poison (e.g., rodenticide) or by eating prey that has been poisoned. Insectivorous mammals may be affected by insecticidal poisons. In cases of toxicity or poisons, there may be vomition & diarrhea. We people have to examine the vomitus for presence of any poisonous substances. Vomitus must be packed in a plastic bag or container for bringing the material to the veterinarian along with our patient.

Bee or venom bites or sting

Bites and stings can be dangerous to an animal, if they are allergic to the venom injected. Signs of bites or stings can include drooling of saliva, vomiting, muscle weakness, difficulty breathing and convulsions. Pressure immobilization is used for snake & spider bites. Cold compress can be applied to other bites and stings. There are also chances of bee or wasp sting to our pet or animals. The sting of bee is acidic in nature, so it can be neutralized by applying baking soda. However, the wasp sting is alkaline in nature, which can be neutralized by applying vinegar or lemon juice on the site. Antihistamine cream is also applied on the region.

Heat stroke

Summer hyperthermia (heat intolerance syndrome) is one of the commonly encountered clinical conditions of exotic and crossbred dairy cows during summer months in India (Chhabra, 2008). There are number of signs exhibited by the animal suffering from heat stroke. There may be panting, polypnoea, seizures etc. Immediately the suffering animal is to be brought at cool and shaded place. Animal should be cooled by hose water or pipe. Here we again like to emphasis that the suffered

animal should not be bath with extremely chilled water, which will create another problem like going animal in shock further. Wet towel should be wrapped around the animal body.

Burn

Animals with burn require veterinary attention unless the burn is very mild. An animal with burns to over 50% of their body has no positive prognosis & euthanasia is recommended. The treatment adopted should be multidimensional. These include restoration of fluid and electrolyte loss, protection against mechanical injury, prevention of bacterial invasion and infection, maintenance of body temperature and removal of non-viable tissue while leaving viable germinal tissue for healing (Geiser and Walker, 1984).

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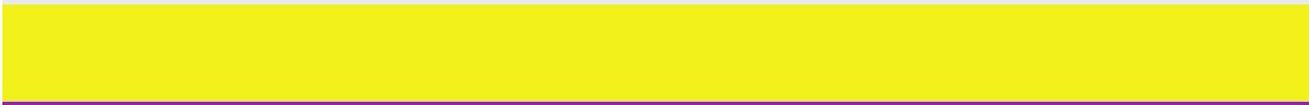


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