Unit 3

Veterinary First Aid

17903CH03

Introduction

First aid for farm animals means immediate treatment of injuries or any other sudden illness in the animals. The objectives of first aid are to save life of the animals and to reduce their pain and suffering. Timely first aid prevents the situation from deteriorating further and promotes recovery of the ailing animal. First aid is done in situations of life-threatening emergencies which require immediate action by the owner or animal health workers.

First aid is provided in case of infectious and non-infectious diseases, any sort of wounds, electrocution and burns, etc. In this Unit, we will discuss about the routes of transmission of infectious diseases. You will also learn about the prevention and control of transmission of diseases, preparation of common antiseptic solution, cleaning of muzzle and hooves and necessary items for a livestock first aid kit.

Session 1: Preventive First Aid Measures for Infectious Diseases

Certain viruses, bacteria, parasites and fungi are responsible for causing infectious diseases. Infectious diseases are transmitted from one animal to another

animal or from animal to human beings by direct or indirect contact.

Different routes of disease transmission

Diseases can be transmitted through different routes. These are mentioned below.

Aerosols

The coughing and sneezing of an infected animal usually coming out in the form of spray can spread an infectious disease. Disease causing agents contained in the aerosol droplets are passed from infected animal to the susceptible healthy animals and healthy humans. Most of these infectious agents do not survive for long periods of time within the aerosol droplets, but the disease gets transmitted if the healthy animal comes in close contact with the infected animal.

Direct contact

The disease gets transmitted when a susceptible animal comes in direct physical contact with the infected animal or its environment (Fig. 3.1). The infection causing organisms enter through open wounds, mucous

Fig. 3.1: Close direct contact causing high risk of transmission of diseases

membranes or through skin. They also enter through blood, saliva, nose-to-nose contact, rubbing or through bites of infected animal. Diseases also spread through venereal contact (from animal to animal through coitus) and also spread through the womb route (from mother to offspring during gestation period).

Oral route

Feed and water offered to animals can be contaminated with infectious agents passed through saliva, nasal discharges, urine and faeces of infected animals. Consumption of contaminated feed or water transmits the disease to susceptible animals (Fig. 3.2 and Fig. 3.3).

Fig. 3.2: Risk of transmission of diseases through contaminated feed

Fig. 3.3: Risk of transmission of diseases through contaminated water

Fomites

Some infectious agents can live for a short time on inanimate objects like farm equipment, feed and water troughs, fencing, etc. When the susceptible animal comes in contact with these contaminated inanimate objects, the infectious agents are transmitted to them. It is a type of indirect route of disease transmission.

Through vectors

A vector acquires an infectious agent from a diseased animal and transmits it to another susceptible animal either while biting or sucking the blood of a healthy animal. Fleas, ticks and mosquitoes are common vectors of diseases in farm animals.

Practices for prevention of disease transmission

Following are the important practices for preventing the transmission of diseases between infected and healthy animals in the animal farms.

Isolation of sick animals

- Isolate all sick animals immediately so that they may not come in contact with other susceptible animals.

Avoid overcrowding of animals

- Avoid overcrowding of animals so that animals are optimally distanced from each other and avoid direct contact with one another.

Regular cleaning and disinfection of farm premises

- Proper and regular cleaning and disinfection of the farm premises and fomites is carried out to reduce the incidence of infectious diseases.

Cleaning and washing of equipment and vehicles used in transporting animals

- As far as possible farm equipment of different types are kept in clean and disinfected condition to minimise chances of disease transmission through inanimate objects. Animal transport vehicles can serve as fomites and are therefore disinfected and cleaned on a regular basis.

Restricted entry in isolated sheds

- Areas where disease animals are isolated are restricted to a limited number of workers to reduce transmission of disease to healthy animals. Staff working in isolation sheds take precautions for personal protection by using gloves, uniforms, masks, boots, etc.

By implementing these preventive measures, farmers and animal owners can reduce the risk of common diseases in their farms. These steps are summarised in Fig. 3.4 as well.

Controlling infectious diseases

Transmission of infectious diseases is controlled by maintaining hygiene and properly cleaning the animal's body parts like muzzle, mouth, hooves, feet, etc., with antiseptic solutions. Cleaning and washing of body parts with antiseptic solution in animals is carried out

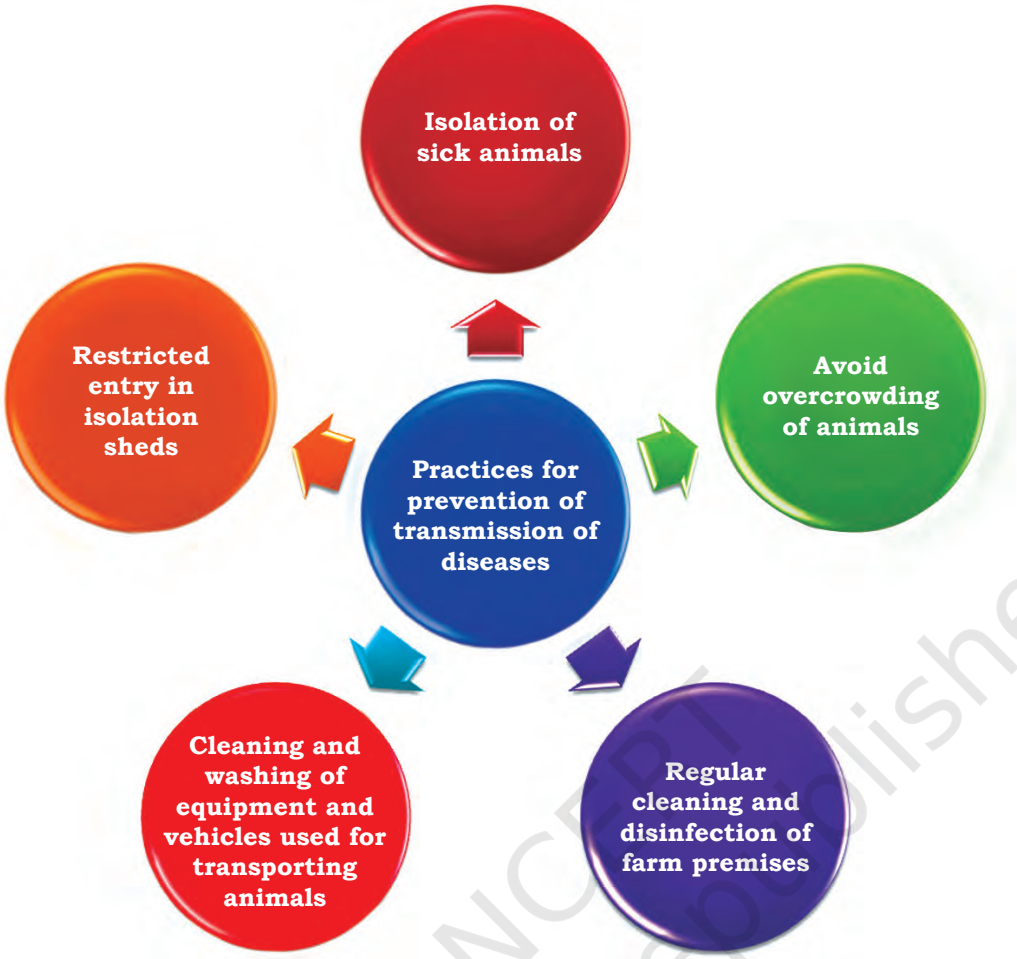

Fig. 3.4: Practices for prevention of diseases

for treating the infections, killing of surface bacteria and reducing transmission of infection to other animals.

Antiseptics

These are substances that slow down or completely stop the growth of micro-organisms on body surface of the animals and thus prevent infections. The skin and mucous membranes of the muzzle, mouth, nose, hooves and feet are fertile grounds for micro-organisms, and antiseptics are mainly used to reduce them. In cases where skin or mucous membranes are damaged, antiseptics are used to disinfect the area and reduce chances of infection.

The most commonly used antiseptic is potassium permanganate solution. Potassium permanganate is a

Fig. 3.5a: Potassium permanganate crystals

Fig. 3.5b: Potassium permanganate solution

chemical compound that is available in crystalline form (Fig. 3.5a). Potassium permanganate 0.01% solution is used for external use on the skin. The solution is prepared just before using it (Fig. 3.5b) for washing of wounds or external injuries on the skin. It can also be used to rinse the muzzle and nose externally. The solution of potassium permanganate may be used several times in a day.

(a) Preparation of potassium permanganate solution

Take one litre of water, boil it for a few minutes and subsequently bring it down to lukewarm levels, say 40°–45°C. Put 0.1 gram of potassium permanganate powder in this lukewarm water and stir well till all the powder is dissolved. The solution thus prepared looks light pink in colour.

(b) Precautions for preparing potassium permanganate solution

(i) Before using the potassium permanganate solution, ensure that all the crystals are dissolved properly because if crystals touch the skin, they could damage it.

(ii) Do not allow potassium permanganate crystals to come in contact with skin and eyes while preparing the solution as it may cause irritation and damage.

(iii) The solution needs to be handled with care as it may dye the skin, nails and clothes of the person handling and administering it.

Fig. 3.6: Feed sticking to moist muzzle indicates good health

Cleaning and washing of muzzle

Muzzle of an animal is the protruding part of its head which includes nostrils, mouth and jaws. The muzzle and nostrils of healthy animals are moist-cool and free from any discharges (Fig. 3.6). If the muzzle shows dryness, it is a sign of disease in the animal. Moreover, if the nostrils of the animal show continuous watery or thick discharge, the animal is considered ill. Such animals can contaminate the feed and water through their nasal discharges.

Feed and water contaminated with the nasal discharge of sick animals can contaminate the common

feed and water sources, transmitting diseases to healthy animals. To reduce the spread of diseases, the ailing animals are separated and their muzzle and nose are washed thoroughly with antiseptic solution. The muzzle could be cleaned twice or thrice per day to maintain the hygiene of the animal.

Footbath

Disinfection of hooves and feet is another important measure in controlling transmission of diseases. Infective agents present in the discharge and secretion of the animals contaminate the floor of the animal house and grazing fields. These infective agents are stuck to the hooves of the moving animals. Footbaths are constructed in the livestock farm for effective disinfection of the hooves of the animals along with disinfection of persons entering into the farm (Fig. 3.7).

A footbath is a specially designed area about 9–15 feet long, 3 feet wide and 6 inches deep filled with a disinfectant solution. The footbath is located at a place where animals can pass through it several times in a day for disinfection of their hooves. The chemical used in the footbath is 5% solution of copper sulphate. The footbath solution is changed after passage of 150 to 300 dairy animals.

Fig. 3.7: A footbath at the entrance of a farm

Suggested items for a livestock first aid kit

First aid measures for farm animals include the immediate initial care administered for an injured or diseased animal until specific treatment is available. First aid is important to minimise the pain and suffering of the animal and to preserve its life.

First of all, it is important to ensure that the first aid kit is easy to find and carry. The kit must be kept clean and dry. It is advisable to stick important names and phone numbers on one side of the kit, so that the important numbers can be found quickly by others even if the primary animal caretaker is away. Following are the essential items of first aid kit for animals.

1. Scissors
2. Flashlight
3. Halter and rope
4. Needle nosed pliers
5. Wire cutters
6. Disposable gloves
7. 4×4 gauze sponges
8. Skin cleanser
9. Several small bottles of sterile saline
10. Water soluble ointment
11. Anti-bloat medicine
12. Trocar and cannula
13. Rolls of medical tape
14. Fly repellent
15. Several large syringes (35–60 cc)
16. Cotton
17. Antibiotic eye ointment
18. Thermometer

Practical Exercises

Visit a nearby livestock farm.

1. Prepare a standard solution of 500 ml of potassium permanganate for use in animals.
2. Perform cleaning of muzzle of young calves.

Check Your Progress

A. Multiple choice questions

1. Muzzle of an animal includes
   (a) nostrils
   (b) mouth
   (c) jaws
   (d) All of the above
2. The solution generally used in a footbath is
   (a) 5% copper sulphate
   (b) 7.5% copper sulphate
   (c) 10% copper sulphate
   (d) None of the above
3. Diseases can be transmitted through
   (a) aerosols
   (b) direct contact
   (c) oral route
   (d) All of the above
4. Transmission of animal diseases can be prevented by
   (a) avoiding overcrowding of animals
   (b) isolating all the sick animals
   (c) proper cleaning and disinfection of the farm premises
   (d) All of the above
5. Which of the following items should be there in a livestock first aid kit?
   (a) Scissors
   (b) Flashlight
   (c) Halter and rope
   (d) All of the above

B. Fill in the blanks

1. The potassium permanganate solution is _____ in colour.
2. Transmission of disease through fomites is a type of _____ route of disease transmission.
3. A general rule is to change the footbath solution after the passage of every _____ animals.
4. Most commonly used antiseptic for animals is _____ solution.
5. For disease control, isolation of _____ animals is required.

C. Mark True or False

1. Muzzle of a healthy animal is moist and cool.
2. Potassium permanganate crystals cause no harm to skin and eyes.
3. Fleas, ticks and mosquitoes are common vectors of diseases in animals.
4. Muzzle should be cleaned only once in a week.

Session 2: First Aid Measures for Non-infectious Conditions

Besides the infectious diseases discussed in the previous session, the farm animals are adversely affected by many conditions which are non-infectious in nature. Some of the non-infectious conditions adversely affecting the farm animals are discussed below.

Simple indigestion

Cattle and goat are ruminant animals. Ruminants are animals with a four-compartment stomach including the rumen (largest compartment), reticulum (honeycomb lining), omasum (many folds) and abomasum (gastric compartment) (Fig. 3.8). Micro-organisms living in the rumen allow ruminants like the dairy cow to digest the fibrous components of feed. The rumen functions in coordination with the reticulum to support contractions of the musculature that create the functions of rumination (cud chewing and rumen contractions) and eructation (gas release).

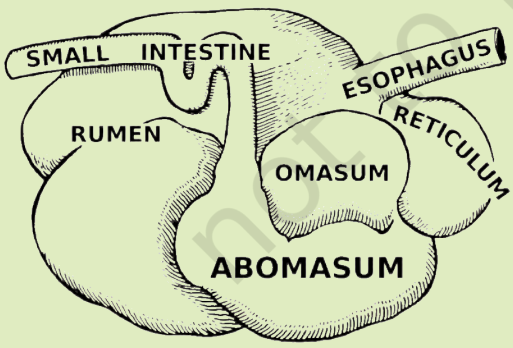

Fig. 3.8: Schematic diagram of four compartments (rumen, reticulum, omasum and abomasum) of stomach of ruminants.
Courtesy: https://goo.gl/4E29mh

Simple indigestion is the failure of normal rumen movements. It is more common in cattle and goats. Rumen movements slow down but do not stop altogether. Simple indigestion is typically related to an abrupt change in the quality or quantity of the diet. It occurs due to excessive feeding of grain or silage, lack of sufficient intake of water and prolonged use of oral antimicrobials. Most common signs of indigestion are that the animal goes off feed either partially or

completely. The ruminal contents become firm, causing mild bloat or swelling on the left flank. Treatment for indigestion is aimed at correcting the suspected diet. Spontaneous recovery occurs when animals are fed a roughage rich diet. The animal is orally given about 20 litres of warm water which helps in restoring normal rumen functions in adult cattle.

Constipation

Constipation is regarded as the sign of other diseases rather than a disease itself. Constipated animals cannot defecate and they pass with difficulty very hard droppings. Constipation can be treated by giving an enema. Enema is the administration of a medicine or warm soapy water into the rectum through anus. Affected animals are offered plenty of drinking water.

Fig. 3.9: Stomach tube

Tympani

It is the abnormal expansion of the rumen and reticulum caused by accumulation of gases in the rumen. Most common clinical signs include expanded left abdomen. The animal experiences pain and discomfort and refuses to graze. The animal feels strained while urinating and defecating with rapid or difficult breathing. The animal may keep the mouth open with protruding tongue and it could die in few hours if tympani persists.

For the treatment of early or mild cases, anti-bloat preparations available in the market are given orally. In moderately affected animals, stomach tube (special type of tube) (Fig. 3.9) can be passed to release the rumen gases and in severe cases, passage of trocar and cannula (Fig. 3.10) is done into the rumen high on the left flank (where the swelling is greatest) to release rumen gases. Passage of stomach tube or use of trocar and cannula requires special veterinary training. Vegetable oil (250–500 ml) or paraffin oil (100–200 ml) is traditionally used to relieve the animals suffering from tympani.

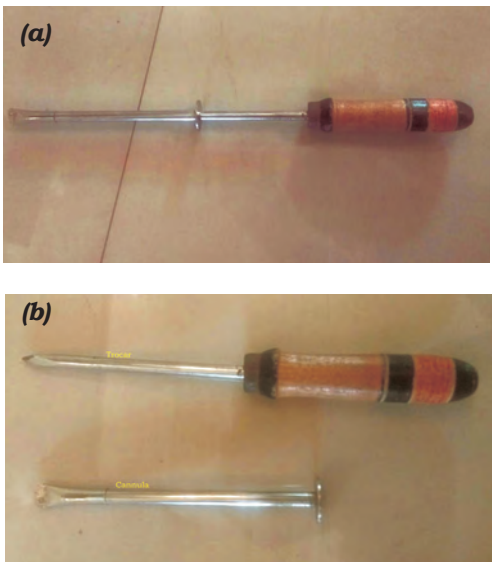

Fig. 3.10: Photographs showing (a) trocar and cannula separately and (b) trocar and cannula together

Impaction

Impaction of rumen means dense packing of rumen with indigestible roughage. It is caused due to ingestion of large amounts of highly fermentable carbohydrate rich food or the leftover of parties or marriages. Common signs start appearing within 6–12 hours of ingestion and include restlessness, kicking at the belly, frequent lying down and getting up and enlargement of upper abdomen on the left side of the belly (Fig. 3.11). The animal goes completely off feed and can even die. For treating the conditions of impaction, the affected animal's access to grains is restricted and the animal is made to exercise vigorously for half an hour for 3 times daily. Water is allowed to the animal in limited quantities at a time. About 200–400 g of sodium bicarbonate dissolved in 1 to 2 litres of water is given orally to the affected animal.

Fig. 3.11: Photograph showing upper abdomen of a cow

Diarrhoea

Diarrhoea means the passage of loose and watery faeces by the animal in increased frequency. The faeces vary in consistency from being soft to liquid (Fig. 3.12). Diarrhoea causes dehydration in affected animals. The affected animal shows signs of dullness, depression, lethargy and weakness with sunken eyes.

Diarrhoea is caused due to infectious or dietary reasons. The treatment for diarrhoea is aimed at correcting the cause of diarrhoea. If it is of dietary origin, the diet is corrected. If it is due to some infection, suitable medicines are given. Initially the digestive system of the animal is given some rest by withholding the feed or offering very light and easily digestible feed for the first 24 hours. To overcome dehydration, plenty

Fig. 3.12: A buffalo calf suffering from diarrhoea

of clean drinking water is offered to the affected animal. The ailing animals are orally given glucose along with electrolyte solution.

All these conditions when detected timely, can be easily managed with the help of preliminary treatment. If improvement is not seen within few hours, then such conditions may be life-threatening for the animal requiring veterinarian's immediate attention.

Practical Exercise

1. Visit a nearby livestock farm and look for animals suffering from tympani, diarrhoea and constipation. Discuss with the farm workers about the treatment that they administer to the animals under such conditions.

Check Your Progress

A. Multiple choice questions

1. Passage of loose and watery faeces in increased frequency is known as _____.
   (a) diarrhoea
   (b) impaction
   (c) loss of appetite
   (d) None of the above
2. Impaction is caused due to ingestion of large amount of _____.
   (a) highly fermentable carbohydrate rich food
   (b) leftover eatables of parties or marriages
   (c) Both (a) and (b)
   (d) None of the above
3. Abnormal distension of the rumen caused by accumulation of gases is known as_____.
   (a) tympani
   (b) impaction
   (c) indigestion
   (d) None of the above

B. Fill in the blanks

1. In animals, dehydration may be caused due to _____.
2. Common sign of _____ is that the animal goes off-feed.
3. Impaction of _____ is caused by eating large amounts of highly fermentable carbohydrate rich food by animals.
4. Glucose and electrolyte solution is given to animals suffering from _____.

C. Mark True or False

1. Simple indigestion is a minor disturbance in the digestive function.
2. Enema is the administration of a medicine or warm soapy water through anus.
3. Constipation occurs when the animal can defecate easily.
4. Diarrhoea does not cause dullness and depression in animals.
5. The stomach of ruminants has only two compartments.

SESSION 3: FIRST AID MEASURES IN SPECIAL CASES

Poisoning

It is a condition in which the animals suffer from a toxic substance or venom of an animal. Poisoning causes deleterious effects on the animals. Animals might swallow the poison, inhale it or absorb it through the skin. Even overdose of medicines given to animals may prove poisonous. Usually farm animals suffer from poisoning by eating poisonous plants, accidentally ingesting urea, rodenticides, pesticides, etc.

Poisoning causes minor irritations like mild abdominal pain, dullness and depression in the animals. In severe cases, the animal refuses to take feed and shows sudden onset of nervous signs like muscular trembling, convulsions and excessive frothing from the mouth. The animal may ultimately die if not treated in time.

Different animal species are susceptible to different plants and poisons. Young animals are generally more susceptible to poisoning than adult animals. Animals may build up resistance to certain poisons by being exposed to small quantities of that poison over prolonged periods. If a large quantity of such a poison is consumed, they may not show symptoms of poisoning because their body is already accustomed to handle that poison.

General principles of first aid in case of poisoning include immediate attention to the affected animal. If the

route of poisoning is through ingestion then purgatives are given to the affected animals. Under field conditions, the poisoned animal is fed with crushed coal because charcoal acts as an antidote for poisoning. If the animal is suspected of poisoning through skin, then the skin of the animal is washed thoroughly with soap and water. Apart from these, expert veterinary care is necessary.

Sun stroke

It is also known as heat stroke. Sun stroke is an emergency situation which results due to excessive muscular exertion of the animal in high environmental temperatures and humidity. Sun stroke results in hyperthermia in the animal. Hyperthermia is the elevation of body temperature above 104°F, which leads to increase in heart rate and respiration rate coupled with restlessness. Hyperthermia causes difficulty in breathing and convulsions and could result in death of the animal.

The treatment for heat stroke consists of reducing the body temperature of the animal. The affected animal is immediately moved to shaded and well-ventilated areas. Water is poured on the body and adequate glucose and water is given orally to the animal. Cold water enema may also be given in some cases depending on the severity of sun stroke. Special veterinary attention is required for the complete recovery of the animal.

Electrocution

Electrocution means accidental injuries or death caused by electric shock passing through the body of the animal. It can happen due to lightning, high voltage electric current from fallen transmission wires and accidental chewing of live electric wires. An animal may come directly in contact with such wires or indirectly through electrification of ponds by fallen electric transmission wires.

The clinical signs of electric shock depend upon the amount of voltage to which the animal is exposed. In most cases of electrocution by lightning stroke, the animal dies on the spot and falls without any struggle. Occasionally, affected animal becomes unconscious but

may recover in a few minutes to several hours. Other signs of electrocution are depression, blindness, etc., which may persist for few days or weeks. Electrocution due to lightning can be detected on the basis of history of lightning, single mark of injury on the dead body of the animal and damage to the immediate environment like burning of adjoining ground area. Treatment is carried out in mildly affected animals and on the basis of clinical signs observed in them. Affected animals are kept in quiet and calm area with minimum disturbances. Adequate water is offered to the affected animals. Skin wounds are treated with application of antibiotic creams.

Burn injuries

Fig. 3.13: Burn injuries on a buffalo

Burn injuries mean any type of thermal injury caused by fire, flames and hot solids. Injuries caused by hot fluids or steam are termed as scald. The extent of a burn injury depends upon the temperature of the hot object and the duration of time for which it came in contact with the animal. An example of burn injuries on a buffalo is shown in Fig. 3.13.

Depending upon the involvement of skin tissue, burns may be classified into three categories, i.e., first degree burn injury, second degree burn injury and third degree burn injury. Fig. 3.14 shows a comparison of the three types of burn injury.

First degree burn injury	Second degree burn injury	Third degree burn injury
• Only superficial and outer layer of skin is involved. • It is a mild type of injury and recovers within few days.	• Partial thickness of the skin is involved. • Vesicles are formed and for early and complete recovery, special care is taken to prevent secondary infection due to bacteria.	• Full thickness of skin and even underlying organs may be involved. • It is the most severe from of burn injury and special attention is required for complete cure of the animal.

Fig. 3.14: Types of burn injury

Common clinical signs of burn injuries involve pain, thirst, anaemia and loss of necessary salts from the body. There is swelling, redness and blisters in the affected areas. The recovery

and survivability of the affected animal depends upon the body area involved, rather than the degree of burn. For treatment, local dressing of the burn with antiseptic like Betadine is done. The contamination of the wound is prevented by covering the area with clean and sterile cloth. Sufficient water and glucose solution is given to the animal.

Wounds

A wound may be defined as any injury in the skin or other body tissues due to a cut, blow or other impact. Wounds may be of different types, as summarised in Table 3.1.

Table 3.1: Types of wound and their features

Type of wound	Features
Incised wound	If the tissues are cut by a sharp instrument and the edges of the wound are smooth, it is called incised or clean-cut wound. Such wounds are also caused during surgical operations on the animal.
Lacerated wound	When the tissues are torn irregularly, the wound is known as a lacerated wound. A cut caused due to a wire is an example of this type.
Contused wound	A contused wound is an injury caused by a blunt object. Such injuries may be superficial or deep. Superficial-contused wounds may be an abrasion to the skin or mucous surface. Deep-contused wounds may be followed by loss of tissues and are generally irregular with swollen margins. Such injuries are commonly caused by kicks.
Punctured wounds	Punctured wounds are deeper than the width of opening or break in the skin or mucous membrane. This class is produced by sharp objects such as nails or splinters of wood.

Wounds frequently remain unnoticed in farm animals and they are allowed to heal on their own without any special care or treatment. A careful and intelligent treatment of wounds greatly reduces the loss resulting from these injuries. The method of treatment varies for the different kinds of wound.

How to control bleeding from a wound?

Bleeding is the most common symptom in many types of wound. The degree of bleeding depends on the kind, number and size of the blood vessels severed. Severe bleeding can also result in death of the animal.

In case of a bleeding wound, the different methods recommended are ligation, pressure, torsion and application of heat. Bathing the wound with hot water is a satisfactory method of controlling bleeding from small blood-vessels. Surgically tying of the cut end of large blood-vessels is also carried out. Pressure over the surface of the wound is the most convenient method of controlling bleeding in most cases. Wherever possible, the wound is bandaged heavily with clean cloth or bandage. Before applying the bandage, it is advisable to cover the wound with a piece of sterile absorbent cotton that is well dusted with boric acid. If the bleeding does not stop by bandaging, then pressure should be applied with the hand or the wound should be packed with absorbent cotton and held in place with sutures. This is left in place for a period of 12 to 36 hours, depending on the extent of bleeding and character of the wound.

Management of wounded animals

The injured tissues are carefully examined for any type of foreign objects or particles such as hair, dirt, gravel, pieces of wood, nails, etc. The hair and torn tissues along the margins of the wound which can interfere with healing are trimmed. Drainage for the wound secretion and pus is provided. Suturing of wound depends on its character and location. A badly infected wound is left open unless satisfactory drainage for the pus and wound secretion occurs naturally. Wounds across the muscle and other movable parts of animals are not sutured.

Post treatment care includes keeping the animal in a quiet and clean place. Wounds in the region of the foot are irritating to the animal due to dirt and rubbing against weeds and grass. Thus, it is advisable to keep the animal in a clean stall until the wounds are completely healed.

Local treatment consists of keeping the wound clean by washing the part daily and applying any antiseptic ointment, lotion or powder over it.

Prolapse of uterus

Uterine prolapse is the protrusion of uterus through the vulva, as shown in Figs 3.15 and 3.16. A mass of uterus is found hanging through the vulva. In delayed cases the mass may get ruptured or lacerated by rubbing through the ground or walls of the cattle shed. It normally occurs immediately after calving or a few hours after calving. Prolapse of uterus is widespread in aged and malnourished animals. Animals with calcium deficiency are particularly susceptible to prolapse of uterus.

The cattle owner or animal health worker immediately washes the prolapsed mass with mild antiseptic solution. If there is swelling of the mass, it is reduced using application of cold ice on the uterine mass. Alternatively, saturated sugar solution can also be applied for reduction of the uterine mass. The cattle owner immediately wraps the prolapsed mass with a wet towel and tries to keep it raised up to the level of the vulva. The prolapsed mass is not allowed to dry. Injuries to the prolapsed mass are avoided and veterinarian is immediately called for treatment.

Fig. 3.15: Prolapsed uterus in buffalo (side view)

Fig. 3.16: Prolapsed uterus in buffalo (rear view)

Practical Exercise

Visit a nearby livestock farm.

Attend a wounded animal, provide first aid and record your treatment.

Check Your Progress

A. Multiple choice questions

1. The management of a bleeding wound requires
   (a) heat
   (b) ligation
   (c) pressure
   (d) All of the above
2. In a first degree burn, the layer of skin involved is
   (a) only superficial and outer layer
   (b) deeper layers
   (c) full thickness of skin
   (d) All of the above
3. The outcome of poisoning may be manifested as
   (a) mild abdominal pain
   (b) depression
   (c) convulsions
   (d) All of the above
4. Electrocution can result due to
   (a) lightning
   (b) high voltage electric current
   (c) chewing of electric cords
   (d) All of the above
5. When the tissues are torn irregularly, the wound is known as a
   (a) lacerated wound
   (b) contused wound
   (c) punctured wound
   (d) incised wound

B. Fill in the blanks

1. _____ is the elevation of body temperature above 104°F.
2. _____ is a condition in which animals suffer from toxic substances.
3. The accidental injuries or death caused by electric shock is termed as _____.

4. Any type of thermal injury caused by fire flames and hot solids is known as _____.
5. Uterine prolapse is the protrusion of uterus through the _____.

C. Mark True or False

1. Bleeding or hemorrhage is the most common symptom in wounds.
2. A contused wound is an injury caused by a sharp object.
3. Some breeds of cattle are particularly susceptible to uterine prolapse.
4. Punctured wounds are wide and less deep.

Glossary

Anaemia: *A non-infectious disease in which haemoglobin is in lower range than required.*

Antiseptic: *A chemical or medicinal substance that prevents the growth of disease causing micro-organisms.*

Dehydration: *A health condition resulting due to the loss of fluids from the body.*

Enema: *Administration of a medicine or warm soapy water into the rectum through anus.*

First aid: *Immediate treatment of injured animals or those suffering from sudden illness.*

Haemorrhage: *Blood oozing out from a ruptured blood vessel.*

Infectious diseases: *Diseases caused by micro-organisms like bacteria, viruses, fungi and parasites.*

Non-infectious diseases: *Diseases which are not caused by micro-organisms.*

Suturing: *A procedure done by a veterinary doctor to hold body tissues after an injury using a needle with an attached thread.*

Wound: *Any injury in the skin or other body tissues due to a cut, blow or other impact.*