



Department: Agriculture

Clostridial diseases



A.J. Olivier

Clostridial diseases

Clostridial diseases are caused by bacteria that occur widely in nature in soil, sewage, water and in the gut of animals. They cause a wide range of signs and effects. Whenever animals die after being sick for a short time or are suddenly found dead these diseases should be suspected.

Factors that can lead to disease

Changes from poor to good food: animals that are placed on lush green pastures after the winter or are suddenly fed rich feeds, such as maize, are at risk

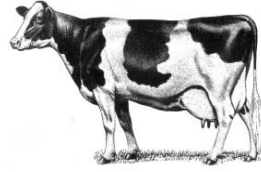
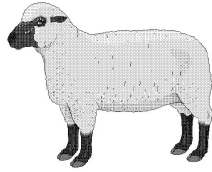
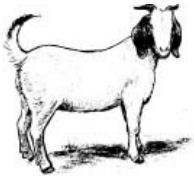
- ❖ Lack of care with procedures such as castration, tail docking, wound cleaning and treatment as well as helping animals to lamb or calve can lead to disease
- ❖ Stress: any abnormal situation, such as sheep lambing in small camps, is dangerous
- ❖ Animals eating carcasses or old bones, or drinking water, or eating feed contaminated by dead animals

SUDDEN DEATH WITH OR WITHOUT GUT SIGNS

Common names of diseases in this category are pulpy kidney (*bloednier*), enterotoxaemia (*rooiderm*), lamb dysentery (*bloedpens*)

Animals affected

Sheep, goats and cattle



Signs in live animals

- ❖ Animals that suffer from these diseases are usually found dead without showing any signs
- ❖ Some animals may show signs of stomach pain, depression, watery grey or bloody diarrhoea, weakness and even nervous signs such as convulsion (fits) or paralysis
- ❖ Mostly young animals are affected, but older animals may also become sick and die

Signs in dead animals

- ❖ Gas-filled red intestines (note that animals that have been dead for a while may show similar signs)
- ❖ Soft, pale kidneys (pulpy kidney)

Often follows

Changes in nutrition, stressful times or procedures, deworming

Prevented by

Care with change in feed, good management, vaccination

SWOLLEN LEGS, HEADS AND SUDDEN DEATH

Common names of diseases in this category are blackquarter (*sponssiekte*), swollen head (*dikkop*), malignant oedema

Animals affected

Cattle, sheep and goats

Signs in live animals

❖ **Animals are usually found dead without signs**

❖ **The part of the body affected may be very swollen. When the area is touched it feels spongy and is filled with gas bubbles**

❖ **Other signs are lameness, depression and swellings as a result of fluid under the skin (oedema)**

Signs in dead animals

❖ **Parts of the body are swollen**

❖ **Affected muscle has a streaky dark red, greyish-red to yellow and black colour and is filled with gas bubbles**

❖ **Wounds from fighting**

Often follows

Lack of care with procedures such as castration, difficulty in lambing or calving, wounds from fighting

Prevented by

Good wound management, vaccination

NERVOUS SIGNS

The toxins produced by clostridial bacteria cause the disease signs. Diseases included are tetanus and botulism

Tetanus

Animals affected

Horses, sheep, goats, cattle and dogs

Signs in live animals

- ◆ The disease develops within 1 to 3 weeks after a wound or a procedure not performed correctly
- ◆ The third eyelid moves across the eye
- ◆ The animal becomes increasingly stiff and walks with difficulty. This leads to paralysis, with spasms of the legs, head and neck
- ◆ Death occurs within 1 to 3 days

Signs in dead animals

- ◆ Infected or neglected wounds

Often follows

A wound or a procedure not performed correctly (e.g. castration)

Prevented by

Good wound management, vaccination

Botulism (*lamsiekte*)

Animals affected

Cattle, sheep, goats, chickens, horses and donkeys

Signs in live animals

- ◆ Animals do not have a temperature and may be partially or totally paralysed

- ◆ The tongue may hang out of the mouth but the animals will still try to eat. Because they cannot swallow, water given carelessly in the mouth may get into the lungs
- ◆ Cattle may die suddenly. Animals die of pneumonia or they stop breathing because of the paralysis
- ◆ Sheep may have an arched back, with a drooping head and neck

Often follows

Contaminated feed and water (dead rats and birds in the feed or water), pica (animals chewing or licking bones or rocks, especially during the dry season and in areas where there is a phosphorus deficiency of the soil), feeding chicken litter

Prevented by

Phosphorus supplementation in licks, clean feed and water, vaccination, removing carcasses from the veld

DISEASES WITH SIMILAR SIGNS

Clostridial diseases can be confused with one another, as well as with anthrax, toxic plant poisoning, snakebites, poisoning with chemicals, rabies, three-day stiff sickness, redwater, heartwater, infection of the brain, tick paralysis, twin lamb disease (*domsiekte*) and tapeworm cysts in the brain

DIAGNOSIS

To determine the disease a postmortem should be done, and this may involve laboratory testing to identify the bacteria and toxin. Samples must be collected as soon as possible after death. Ask your animal health technician or state veterinarian to collect the samples and send them to the laboratory

TREATMENT

Because these diseases start suddenly with few signs, treatment is nearly always too late to cure the animal. Supportive treatment and antibiotics, such as penicillin, may help in early cases.

Treatment of tetanus and botulism is difficult, with poor results. In the early stages, treatment with a

substance called antitoxin against the disease may save the animal, but it has to be given as soon as signs are noticed and is not always on hand at times when it may be needed.

PREVENTION

❖ **Vaccination against the diseases is the best and most practical way to prevent animal losses. Consult your animal health technician or state veterinarian regarding a vaccination programme**

❖ **Good management will prevent many of these diseases**



**For further information contact your animal health technician, state or private veterinarian
or
Animal Health for Developing Farmers
ARC-Onderstepoort Veterinary Institute
Private Bag X05, Onderstepoort 0110**



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