Coccidiosis

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Coccidiosis is an intestinal disease that affects several different animal species. In cattle, coccidiosis may produce clinical symptoms in animals from 1 month to 1 year of age but is infective to all age groups.

The causative agent is a protozoan that has the ability to multiply rapidly. The group of coccidia that are infective to cattle belong to the Eimeria genus. Coccidia are very host specific, that is, only cattle coccidia will cause disease in cattle, other species-specific coccidia will not cause disease.

The major damage is due to the rapid multiplication of the parasite in the intestinal wall, and the subsequent rupture of the cells of the intestinal lining. Several stages of multiplication occur before the final stage, the oocyst, is passed in the feces. Oocysts are extremely resistant to environmental stress and are difficult to completely remove from the environment. Oocysts must undergo a final process called sporulation before they are again infective. Oocysts are frequent contaminants of feed and water and when the sporulated oocysts are ingested by other animals they start the life cycle over in the new host.

Clinical Signs

Clinical signs of coccidiosis usually are present or shortly following stress such as weather changes; weaning; overcrowding; long truck rides; unsanitary conditions; and other disease conditions such as shipping fever.

Symptoms or signs of coccidiosis will depend on the state of the disease at the time of observation. In general, coccidiosis affects the intestinal tract and symptoms are associated with it. In mild cases, only a watery diarrhea may be present, and if blood is present in the feces, it is only in small amounts.

Severely affected animals may have a thin, watery feces with considerable amounts of intestinal mucosa and blood. Straining usually is evident, rapid dehydration, weight loss and anorexia(off feed) also may be clinically visible.

"Nervous coccidiosis" is a nervous system condition associated with coccidial infection. Signs are consistent with central nervous system involvement, and include muscle tremors, convulsions and other central nervous symptoms. A consistent sign in "nervous cocci" cattle is that stimulation of any type seems to trigger the symptoms.

Death may follow the acute disease either directly or from secondary diseases such as pneumonia. Animals that survive for 10 to 14 days may recover, however, permanent damage may occur. Research has indicated that cattle may experience reduced feed consumption for up to 13 weeks following clinical infection.

The post-mortem lesions associated with coccidiosis generally are confined to the cecum, colon, ileum and rectum. There usually is an eroded lining of these regions with blood in the lumen.

Diagnosis usually is obvious but confusion does exist—apparently normal animals can have oocysts

present in the feces. Diarrhea may be present in the animal before the oocysts can be found, therefore, a confirmed laboratory diagnosis may not always be possible. Laboratory findings should be correlated with clinical signs for a diagnosis.

The susceptibility of animals to this disease varies. The ingestion of oocysts may not produce the disease; some animals constantly carry them without being affected. Recovered animals develop immunity and seem to be partially resistant to reinfection.

Coccidiosis is frequently referred to as an opportunist —a disease that will develop when other stress factors are present. For example, the highest incidence of coccidiosis is in the first 21 days cattle are moved to a feedlot. If a normal animal carries oocysts, it is relatively easy for rapid development when the conditions are right—adverse weather, shipping, feed changes, and other stresses are important.

Treatment

Treatment of infected animals is required. Individual treatment should be used when possible, however, medications are available for herd applications. The actual coccidiosis problem is critical and in addition, dehydration and loss of appetite must be treated.

Drug selection should be handled by your veterinarian. Sulfas, antibiotics for secondary bacterial infections, and the therapeutic dose of amprolium are available for use. There are excellent products available for mass medication as well.

Treatment and prevention are most effective when started early. Most confinement operations medicate at the time of arrival. Management can reduce exposure by reducing stress, such as overcrowding and poor sanitation.

In case of a confirmed outbreak of coccidiosis in a group of cattle, the following steps should be started immediately:

1. Separate the sick animals from the healthy ones.
2. Treat sick animals with effective medication as prescribed by your veterinarian.
3. Instigate mass or pen medication, as the other animals are likely infected.

The following suggestions will aid in the prevention of coccidiosis:

1. Do not feed on the ground.
2. Minimize stress as much as possible.

General information on coccidiosis in cattle:

1. Coccidiosis is an opportunistic disease—it affects stressed animals.
2. Feedlot conditions provide ideal circumstances for an outbreak.
3. In most confinement situations, prevention with coccidiostats is a wise strategy. Labeled coccidiostats available for prophylaxis include amprolium, monensin, lasalocid and decoquinate. These products affect different stages of the life cycle of coccidia, thus sound veterinary advice is needed in the choice of products.
4. Mass treatment or pen medication usually is effective.
5. Sick animals should be treated as soon as possible and isolated from other animals.
6. Consult your veterinarian for diagnosis, prevention and treatment recommendations.

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