

LISTERIOSIS IN GOATS

By Karen Kopf

SYMPTOMS

Encephalitic listeriosis has the highest mortality rate and is most prominent in small ruminants.

- Depression
- Loss of appetite
- Decreased milk production
- Fever

As the brain swells and the disease progresses, symptoms include:

- Weakness
- Lack of coordination
- Animal circles in one direction
- Partial facial paralysis
- Head pulled back with a rigid neck
- Ear drooping
- Salivation
- Slack jaw
- Seizures

Septicemic listeriosis is most common in single-stomach animals.

- Diarrhea
- Abortion
- Mastitis

Handle aborted kids and placentas with sterile precaution, as people have developed fatal meningitis, septicemia, and rashes on the arms after handling tissues contaminated with listeria.

Diagnosis is done primarily by clinical signs, and fatalities occur within 24-48 hours of symptom onset. With prompt aggressive treatment, the Merck Veterinary Manual suggests a 30% survival rate. Diagnosing the encephalitic form is challenging, as symptoms can mimic polioencephalomalacia (cerebrocortical necrosis), also called goat polio. Neurological symptoms can also be indicative of poisoning from other sources. Abortions and diarrhea can have several causes.

Listeriosis, also called Circling Disease and Silage sickness, is a life-threatening disease caused by bacteria *Listeria monocytogenes* and *Listeria ivanovii*. *Listeria* is zoonotic and can be transferred to humans. It thrives in aerobic conditions and can withstand temperatures from 34-113 degrees F. It persists almost anywhere, including soil, manure piles, gastrointestinal tracts, the top layer of silage, and moldy hay or feed. It is also commonly found in the feces of infected birds, animals, fish, and insects as well as sewage.

Outbreaks in livestock are most prevalent in spring and fall. People and animals in good health are usually not affected by listeria, but in humans the highest risk is for pregnant women and the immunocompromised. It can be carried by a host with no symptoms and can be shed in milk and feces.

TREATMENT

High doses of procaine penicillin every six hours until symptoms have disappeared. Use sufficient dosage to cross the blood/brain barrier and deliver antibiotic to the central nervous system. This requires consultation with a veterinarian. The vet may prescribe Dexamethasone or Banamine. Be aware that dexamethasone will cause abortion in pregnant does. Using Dexamethasone and Banamine simultaneously can cause fatal hemorrhaging.

Some producers also use herbal remedies in conjunction with pharmaceutical treatment, including usnea extract, thyme, oregano, rosemary, garlic, and apple cider vinegar. These may be effective as support treatments, but they cannot cross the blood/brain barrier to reverse disease progression.

Intravenous administration of fluids and nutrition may be necessary for animals that are severely compromised.

Prevention

- The best prevention is good hygiene and sanitation. Clean soiled feed bunks

and water troughs often. Keep wild birds away from where the herd feeds. Store feed properly.

- Do not feed silage to goats unless you are very familiar with handling and storing it. Avoid wet, moldy hay and grain. Be aware that feeds formulated with molasses have a high incidence of mold, especially in hot weather. Do not feed grass clippings. Do not allow animals to graze boggy areas. Do not feed rough, coarse feed that may injure the mouth.

- Protect rumen balance. Be aware of stressors such as weaning, parasites, sudden weather changes, confinement, changes in herd structure, and abrupt changes in feed that can alter the rumen pH, giving listeria an opportunity to grow.

- Isolate animals showing symptoms and use sterile precaution when treating. If a doe is shedding listeriosis, raise kids on milk replacer or milk from a clean doe. In the event of death, submit the animal or aborted tissue to a lab for necropsy.



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