



14. Eyes

Most diseases of the eye present the same way:

There is discharge and tear staining of the face.

The eye is held closed.

Most animals will avoid direct light.

In all cases it is necessary to perform a basic examination of the eye to determine the cause of the problem. This is best done in a dark area using a flashlight.

Entropion

Cause

The cause of this disease seems to be genetic; however, the heritability pattern is unclear.

Clinical Signs

Watery or red eyes in newborn lambs. Close examination will show that the lower eyelid has rolled in so that the eyelashes, and possibly hair on the eyelid, are rubbing against the surface of the eye. The cornea may be cloudy.

Treatment

In **early, simple cases**, you can simply roll the eyelid out with your finger and monitor to make sure the problem does not reoccur.

In **more complex cases**, a small amount of saline can be injected into the lower eyelid to create a bubble; this stretches the eyelid and prevents the problem from reoccurring. This technique requires some skill. Ask your veterinarian to teach you how to do this.

In **severe cases** it is necessary to put a stitch in the lower eyelid. Again, ask your veterinarian to teach you how to do this safely. The stitch must be removed after approximately seven days.

Note: Eye infections in newborn animals are extremely rare. In almost all cases entropion is the cause of newborn eye problems.

Pink Eye (Conjunctivitis)

Cause

Pink eye refers to inflammation of the soft tissues surrounding the eyeball, known as the conjunctiva. This condition may occur for a number of possible reasons. Pink eye in sheep differs from cattle because it is typically caused by *Mycoplasma* or *Chlamydophila ovis* (the cause of contagious abortion). The agents can be spread by fleece-to-fleece contact when animals are crowded, especially at feed troughs or feed fences. It can also be spread by flies.

Clinical Signs

The eye is closed or the animal blinks repeatedly. There may be a pus-like discharge. Close examination will reveal that the membranes of the eye are reddened.

Diagnosis

In a severe outbreak of disease it may be helpful to collect swab samples from affected eyes and have the laboratory identify the cause; the treatment can then be targeted more precisely. However, most cases are simply treated with antibiotics.

Treatment

Many **mild cases** will simply clear up on their own.

More **serious cases** are troublesome. Seriously affected animals should be separated from the flock. Treatment typically involves a combination of systemic (injectable) antibiotics and topical (eye ointment) antibiotics. Long acting oxytetracycline is effective against most cases of pink eye. A single treatment is often sufficient.

Antibiotic eye ointments containing oxytetracycline are even more effective but need to be administered three times a day, which is very time consuming. If a case of pink eye fails to respond to three days of treatment you should contact your veterinarian.

It is also possible to inject antibiotic into the lower eyelid. Ask your veterinarian to teach you how to do this before attempting the procedure.

Conjunctiva is the alternative spelling for conjunctiva.

Note: Long acting oxytetracycline and antibiotic eye ointments containing oxytetracycline are off-label – talk to your veterinarian.

Prevention

It is not possible to eradicate pink eye completely because animals may carry the disease without any obvious signs. However, never buy animals with obvious eye disease and mix them with your flock. All additions to the flock should be quarantined for thirty days.)

Foreign Body

Cause

Something stuck in the conjunctival sac (typically a piece of dust, hay or a seed) often causes irritation. Foreign bodies in the eye are among the most common causes of eye disease.

Clinical Signs

As described above. When you open the eye, all the eye tissues will be bright red and very inflamed.

Diagnosis

Foreign bodies tend to fall under gravity and sit under the lower eyelid. Gently pull the lower eyelid down and look for a foreign body. If you find one, roll it out using the eyelid. The other place that foreign bodies can accumulate is under the third eyelid in the inner corner of the eye. Put on a latex glove, wet the little finger and carefully feel under the eyelid for a foreign body. If you find one, hook it out with your finger.

Treatment

In most cases, no further treatment is necessary. If the eye is severely inflamed a course of antibiotic ointment may be beneficial. No drugs are licensed for use in any small ruminant eyes, so talk to your veterinarian.

ELDU

Extra-label drug use, also referred to as "off-label use" refers to the actual use or intended use of any drug, whether it is a prescription drug or over-the-counter (OTC) drug, in an animal in a manner that is not in accordance with the approved label or the package insert of the drug licensed by Health Canada.

Serious Eye Injuries

Cause

Many causes are possible, including severe infection, traumatic injury and severe foreign body implantation.

Clinical Signs

May look like pink eye but fail to respond to treatment. The eye may also have obvious severe damage.

Treatment

In these severe cases the eye should be removed by your veterinarian, if the animal's value warrants it; otherwise, the animal should be euthanized.



15. Urinary System

Relatively few conditions affecting the urinary system occur with any frequency. The most common problems are seen in young males being finished for slaughter. Disease typically presents as straining to urinate.

Urinary Calculi (Urolithiasis, Bladder Stones)

Cause

High levels of dissolved salts in the urine may start to settle out and form small crystals in the urine in the bladder. These crystals start to grow, forming small stones. If small enough, these stones may simply be passed with a normal urine stream. The danger arises when a stone is small enough to enter the urethra (pipe connecting the bladder to the outside world). Because the urethra is longer and narrower in males, these stones may become lodged, blocking the flow of urine. Stones most commonly lodge in the urethral process on the end of the penis. They may also create blocks in the sigmoid flexure and the opening of the bladder, as well as in the kidney and the ureter (structure connecting kidney and bladder).

There are several different types of stones found in sheep and goats. The most common are phosphatic calculi. This type of stone occurs in animals on a high-carbohydrate, low-forage diet rich in phosphorus. It is especially common in castrated males, and the Texel breed appears to be at an increased risk. The disease is especially common in male feeders of either species.

Clinical Signs

Affected animals have difficulty urinating. They may be seen to be straining and dribbling urine, and may vocalize. The abdominal muscles can be seen contracting and the tail may “flag.” Blood is sometimes present in the urine.

Any suspect animal should be caught and the penis examined to see if a stone can be identified in the urethral process.

Treatment

As many as two-thirds of cases can be treated simply by amputating the urethral process with a clean, sharp pair of scissors. Discuss this with your veterinarian, who can teach you how to identify and correct the problem.

Other treatments exist for dealing with stones farther up the urethra or in the bladder. All of these techniques require a veterinarian and are surgical in nature.

Prevention

Animals at risk must always have free access to plenty of clean water to ensure ample production of dilute urine. Adding regular salt (sodium chloride) to the diet at three to five percent may also work to increase the amount of water that the animals drink.

Balancing salts in the diet, especially phosphorus, calcium and magnesium, is the real key to controlling this disease.

Ideally the diet should contain a two to one ratio of calcium to phosphorus. Cereal grains are all high in phosphorus and low in calcium; pelleted rations can make matters worse as these diets result in reduced saliva production.

The situation can also be made worse by feeding very high protein diets.

In general, to avoid the condition, feed some forage, ideally alfalfa which is high in calcium. Thirty percent forage diets also provide sufficient beta-carotene, which has been shown to reduce stone formation.

Other techniques to reduce stones focus on acidifying the urine using vitamin C or ammonium chloride. Consult a nutritionist on supplementation.

Types of Stones

Whenever urolithiasis is suspected, stones must be submitted to the laboratory for analysis. Other types of stones such as silicates and oxalates require a different prevention strategy. Consult your veterinarian for further advice.

Pizzle Rot

Cause

Male animals kept on a very high protein ration may be prone to an infection of the prepuce and enlargement of the penis caused by *Corynebacterium renale*.

Clinical Signs

There may be signs of straining to urinate and swelling of the prepuce. Close examination will show matted stained hair around the prepuce, a foul odour and thick discharge.

Treatment

The following should be done:

1. Reduce the protein content of the diet.
2. Thoroughly clean the prepuce area.
3. Shear hair from around the prepuce.
4. A short treatment with antibiotics (for example, penicillin) may be helpful.

Prevention

Avoid feeding diets which contain excessive protein.

