Lamb Dysentery

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Leevers-Rich Recording.

Colour
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00:00:00:00

<**Opening credits**>

<**John Snagge narrates over shots of countryside and sheep**>

Lamb dysentery is an acute and fatal disease of young lambs. It is most prevalent in the border counties of England and Scotland. It was in this area that daring new workers carried out the first investigations which led to the effective control of the disease by prophylactic sera and vaccine.

The infection is also widespread in North Wales and appears to be spreading in other parts of the country.

<**Snagge over shots of farmer delivering newborn lamb, then further shots of lamb**>

The disease is caused by a germ which is present in the soil of infected farms. Lambs are most susceptible during the first few hours after birth, and they have many opportunities of picking up the germ from the infected soil. Some of the soil may be swallowed while the lamb is struggling to its feet. Or while the ewe is cleansing it, she may deposit soil around its mouth.

But it is more probable that the lamb picks up the germ from the ewe's fleece or udder while it is trying to suck and the rich milk medium which the intestine contains at this time is very suitable for the growth and multiplication of the germ.

<**Snagge over shots of lambs with dystentery**>

The symptoms vary considerably in intensity, but generally within 3 days of its birth the infected lamb is obviously seriously ill and showing signs of acute abdominal pain. Diarrhoea is usually a prominent symptom and there may be dysentery, that is, blood in the excreta. Once the disease has developed it is, invariably, fatal within 14 days.

<**Snagge over shots of autopsy of a lamb**>

For field diagnosis, the dead lamb is opened so that the intestines may be examined. The inflamed and ulcerated appearance of these makes diagnosis reasonably certain. But this may only be confirmed by sending a specimen to the laboratory for investigation.

<**Snagge over shots of lamb intestine being examined in a laboratory**>

Here, the contents of the intestine can be examined for the presence of the germ, and for the toxins or poisons which are the by-products of its growth. It is these toxins which are absorbed into the blood stream and cause the death of the lamb.

A sample of the contents is withdrawn and is inoculated into an artificial culture medium. When this has incubated at blood heat, the germ will multiply rapidly and produce the same toxins as it would have done in the lamb's intestine. After 5 hours incubation, the toxins are present in measurable quantities and the germ exists in large enough numbers for convenient examination under the microscope. A drop of the culture is extracted and placed on a glass slide while the rest is sent for identification of the toxins by in vitro and in vivo tests.

The slide is fixed and after suitable staining it is placed under the microscope at high magnification.

<**Snagge over shots germs seen through a microscope, then animated diagram of germs as though seen under a miroscope.**>

The germs belong to the *Clostridium welchii* group of organisms. At this stage of their growth, they appear as short rods. Under different and less favourable conditions they are capable of changing into resistant forms known as spores. This change can only be shown diagrammatically, as if we were watching it happen on the stained slide under the microscope.

A number of the germs have now changed into spores. In this form they can survive for an indefinite time.

<**Snagge over shots of lambs, followed by shots of dead lambs**>

Thus the excreta from diseased lambs contain germs which are still living so that the ground becomes contaminated locally. Or the disease may be spread further afield on the feet of animals.

For the same reason, when the lamb has died, the intestines are still infective and crows and foxes which attack the dead lambs and scatter the entrails may also help to spread the disease. It is advisable therefore to collect all dead lambs and burn them or bury then deeply.

<**Snagge over various shots of countryside and sheep, then farmers inoculating sheep**>

Since the germ is present in the soil, the only practical method of protecting against the disease is to make the lamb immune. This can be done in two ways. One method is to inject the ewe with a formalised vaccine made from the germ so that it develops protective antibodies which are passed to the lamb with the colostrums or first milk. Two vaccine injections are given: one in the autumn and the second near to lambing time. The other method is to inject the newborn lamb with serum containing the anti-toxin. This must be done as soon as possible after birth.

If no control methods are taken, the deaths from lamb dysentery may, quite commonly, amount to one third to two thirds of all the lambs born. But these losses may be avoided by the correct use of efficient sera or vaccines, so that even on the most heavily infected farms a full lamb crop may be reared.

<**End credits**>