"Foreign Animal Diseases That Threaten Sheep and Goats"

Virginia-North Carolina Shepherds' Symposium
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Assessment
- Terrorism -- Foreign/Domestic
- Domestic Movement
- Global Community/Culture/Trade

Foreign Animal Diseases
- Foot and Mouth Disease
- Rift Valley Fever
- Rinderpest
- Heartwater

Foot and Mouth Disease

Foot and mouth disease (FMD) is a highly contagious viral disease that affects cloven-hoofed species, such as cattle, pigs, and some camels. The disease is spread primarily by aerosols or by direct contact. The disease can spread quickly, often resulting in the destruction of entire herds or flocks. The disease is not usually deadly to the host, but it can cause significant economic losses to farmers and livestock owners.

Biology
Foot and mouth disease is caused by an orthomyxovirus in the family Pneumoviridae. The virus is highly contagious and can spread quickly through direct contact or by aerosols. The disease is typically characterized by fever, respiratory symptoms, and lesions on the tongue and feet. The disease can be prevented through the use of vaccines and good hygiene practices.

Symptoms affected
FMD primarily affects domestic and wild animals, including cattle, horses, sheep, and goats. Other susceptible species include camels, donkeys, mules, and pigs.

Geographic distribution
FMD is found in many countries worldwide. It is found in Africa, the Middle East, and parts of South America, as well as in many parts of Europe. It has also been found in Australia, New Zealand, South America, and Africa.

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Transmission
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Prevention
FMD can be prevented through the use of vaccines and good hygiene practices. Vaccines are available for many species, including cattle, horses, sheep, and goats. Good hygiene practices, such as the proper disposal of animal waste and the disinfection of equipment, can also help prevent the spread of FMD.

Control
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Foot and Mouth Disease (FMD)

Foot and mouth disease is a highly contagious viral disease that affects domestic and wild ruminants, such as cows, sheep, and goats. It is caused by the foot-and-mouth disease virus (FMDV), which belongs to the genus Amapavirus within the family Picornaviridae. The virus is transmitted through direct contact or aerosolized virus droplets from infected animals, as well as through contaminated objects or equipment. The disease is characterized by fever, ulcers in the mouth and on the feet, and vesicles on the tongue, lips, and udder. The incubation period is typically between 2 and 5 days, but can range from 1 to 10 days. Treatment for FMD is usually supportive, and involves the use of anti-inflammatory drugs and corticosteroids. The disease is usually prevented through vaccination and strict biosecurity practices. The disease is a notifiable disease in most countries, and outbreaks are monitored and reported to the World Organization for Animal Health (OIE).
Rift Valley Fever (RVF)

Rift Valley Fever can be transmitted from animals to people through bite, contact or aerosol transmission. The disease occurs in Africa, but is also prevalent in some parts of the Middle East and Asia. The disease can be spread by insects or ticks. The incubation period can range from 3 to 7 days, and the disease can last for up to 21 days. Treatment is supportive care, and the disease is often fatal in severe cases.

For More Information

References

Image of Rinderpest

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Rinderpest

Rinderpest virus (RPV)

Other members of the family include:

- Human measles virus
- Canine distemper virus
- Disease caused by one type of virus
- Field strains vary

History

- "Rinderpest" - German for pestilence or cattle plague
- 1184 BC: The siege of Troy
- 1762: First veterinary school established in France
- 1885: "Great African Pandemic"
- 1960's: Eradicated from most of Europe, China, Russia, Far East
- 1982: Global Rinderpest Eradication Program (GREP)
Global Rinderpest Eradication Program

Animal Transmission
- Aerosol transmission
  - Very short distances only
- Most infectious period
  - 1-2 days before clinical signs
  - 5-6 days after onset of clinical signs
- Vector transmission unknown
- No chronic carrier state
- Wildlife not a reservoir unless cattle are infected

Animals Affected
- Cattle, buffalo
- Most wild and domestic hooved animals can become infected
  - Zebu, sheep, goats, pigs and wild ungulates in contact with cattle
- Without reinfection from cattle RPV would die out in wild game

Classic Form of Rinderpest
- Fever, depression, lose of appetite
- Constipation followed by bloody diarrhea
- Nasal/eye discharge
- Raw/open sores in the mouth
  - Drooling
  - Dehydration
  - Death in 6 to 12 days

Sickness/Death
- Prognosis is poor in previously non-infected populations
- Death rates may reach 100%
- Susceptible stock are immature or young adults

Rinderpest in Humans
- Rinderpest virus does not cause disease in humans
Heartwater

Heartwater is a bacterial disease spread by ticks that causes illness in animals.

Transmission

Heartwater is transmitted by sheep ticks or nose-bleeding ticks (both common in certain parts of the world). The disease is spread by contact between animals, and it can be transmitted from an infected animal to a healthy one through contact with saliva, nose secretions, or blood.

Diagnosis

Diagnosis of heartwater is usually made through blood tests, which detect specific antibodies to the bacteria. The test results are usually positive within a week of infection.

Incubation period

The incubation period of heartwater is variable, but it typically ranges from one to several weeks.

Clinical signs

The clinical signs of heartwater are similar to those of other tick-borne diseases, such as fever, anemia, and anemia of nitrogen. However, the presence of heartwater is usually accompanied by weakness and collapse.

Treatment

There is no specific treatment for heartwater, but antibiotics may be used to control the bacterial infection. Severe cases may require supportive care, such as fluid therapy and blood transfusions.

Prevention

Preventing heartwater involves controlling the tick population, especially in areas where the disease is endemic. This can be achieved by using insecticides, applying tick control products, or vaccinating animals against heartwater.

Survival

Survival rates for animals infected with heartwater are variable, but they are generally high. However, the disease can be fatal in severe cases, especially in young animals or those with underlying health problems.

Heartwater

Heartwater is a bacterial disease spread by ticks that causes illness in animals. This disease is caused by bacteria transmitted by sheep ticks or nose-bleeding ticks. The disease is widespread in parts of Africa and Asia, and it can cause significant economic losses to livestock farmers.

Epidemiology

Heartwater is transmitted by sheep ticks or nose-bleeding ticks. The disease is more common in areas with high tick populations, and it is often seasonal. The disease can be transmitted from an infected animal to a healthy one through contact with saliva, nose secretions, or blood.

Species affected

The disease affects sheep, goats, and cattle. However, it can also affect other species, such as camels and yaks. The disease is more severe in young animals and in those with a weakened immune system.

Geographic distribution

Heartwater is common in parts of Africa and Asia, especially in countries with high tick populations. The disease has also been reported in Europe and in some parts of North America.

Public health

Public health officials in affected countries should be aware of the disease and its potential impact on human health. This will help in the early detection and control of outbreaks.

References

Veterinary Involvement

- Similarities of Disease
- Subclinical/Clinical Symptoms
- Testing
- Reporting

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