



Infectious

Bovine

Rhinotracheitis

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INFECTIOUS BOVINE RHINOTRACHEITIS

Infectious bovine rhinotracheitis is also known as IBR, red nose, and IPV (Infectious Pustular Vulvovaginitis). It was originally recognized as a respiratory disease of feeder cattle in Western United States. As investigations progressed and virological techniques improved, IBR became recognized as a complex of disease syndromes recognized throughout the United States and over the major cattle producing areas of the world. Cattle and some wild ruminants are the only known hosts.

SYMPTOMS ARE VARIED

Respiratory Syndrome:

Respiratory symptoms were the first signs reported for this disease. These include difficult inhalation, a profuse watery nasal discharge that becomes thicker and darker as the infection progresses, respiration is rapid and the involved animal takes a stance with the head and neck extended. Depression, elevated body temperature (104-108° F), and decreased appetite accompany the respiratory signs. As the infection progresses, the nostrils become encrusted, there is a rapid weight loss and diarrhea may be observed. If crusts on the nostrils are rubbed off, the underlying tissue is very red and inflamed, hence the term "red nose".

This form of the disease is usually observed in concentrated groups of cattle, such as in feedlots. Large numbers of cattle in close contact provide an ideal situation for the rapid spread of the virus agent. As the agent passes from animal to animal, its ability to produce disease increases.

It requires approximately one week following infection for the initial signs of disease to appear. The history of an outbreak is usually one or several sick animals about one week previous to a large number of animals exhibiting illness. The number involved may be 15 to 100 per cent of a herd with a death rate of 0 to 5 per cent of the affected animals.

The respiratory form of this disease is the most frequently observed form under feedlot conditions.

Infectious Pustular Vulvovaginitis (IPV):

Cattle exhibiting the vulvovaginitis form of the IBR complex are sexually matured females that exhibit no systemic illness. The signs of IPV include a thick yellow to brown colored vulvar discharge that attaches to the vulvar tuft of hair. The vulva is swollen, and, upon examination, the vulvar and vaginal lining will be reddened, necrotic, and/or contain small whitish-colored pustules. The vaginal-vulvar infection causes irritation which is exhibited by frequent tail-switching and urination. Temporary infertility accompanies this infection.

Lesions similar to those observed for IPV may be observed on the bull's penis and prepuce. This infection is believed to result from coitus with an IPV-infected female. Temporary decreased libido is usually associated with this form of infection in the male. The condition is known as balanoposthitis.

Abortion:

The abortion form of IBR has in the past several years become as great a problem in the cattle industry as the respiratory form. The source of infection has not been specifically identified. Possible sources include new additions (sheddors) to the herd, vaccines, birds, or wild ruminants. Often this abortion is preceded by a mild respiratory and/or eye infection (pink eye), although abortion occurs without observed signs of illness. The aborted feti have no consistent gross characteristic lesions. The abortion may occur at any stage of the gestation period. Death and absorption of the fetus may occur in early pregnancy and may be observed as an infertility problem. Both beef and dairy cattle may be involved, with up to 75 per cent of the herd aborting. Abortion has been reported in herds two successive years, possibly indicating that recovery does not produce a complete immunity. Abortions have also been occasionally reported in herds where a program of IBR vaccination has been practiced for up to several years previous to the onset of abortions. The reproductive tract of an aborted animal is apparently not injured and normal pregnancy may follow abortion.

Abortions may also be produced by vaccination of pregnant cattle with a modified live IBR virus vaccine.

Pink eye (Keratoconjunctivitis):

The pink eye form of IBR may accompany or precede the respiratory or abortion form of this disease. The signs are reddened, swollen mucous around the eye with a clear, watery secretion that drains over the hair below the eye. The secretions cause a matting of the hair with a collection of dirt and other debris. As the condition progresses the lacrimal secretions become thicker and darker.

Other disease conditions observed in cattle from which the IBR virus has been isolated include encephalitis in young cattle. This nervous system infection may appear similar to the nervous form of listeriosis.

The IBR agent has also been suggested as a cause of viral mastitis.

PREVENTION

All new additions to an established herd should be examined by a qualified veterinarian and have a health certificate indicating that they were disease free when purchased.

All new additions should be isolated for at least 30 days and re-examined by a competent veterinarian before having contact with the established herd.

Isolate all diseased animals immediately upon detection. This will aid in preventing contact and spread of the infection.

Numerous IBR vaccines are readily available. They should be used only as the instructions on the label indicate. Never vaccinate pregnant cattle, as abortion is likely to follow vaccination. Though transmission by vaccination has never been definitely established, the prudent cattlemen should not let recently vaccinated cattle have contact with unvaccinated, susceptible cattle.

TREATMENT

There is no chemotherapeutic or biological preparation for the treatment of the IBR viral infection. Secondary infections which usually result in death may be controlled by the use of chemotherapeutic compounds such as antibiotics or sulfonamides.

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