



South Dakota
Animal Industry Board

VESICULAR STOMATITIS





What is Vesicular Stomatitis (VS)?

Vesicular stomatitis is a viral disease that primarily affects horses, donkeys, mules, cattle, and swine. This disease also occasionally affects sheep and goats. Many species of wild animals, including deer, bobcats, goats, raccoons, and monkeys, have been found to be susceptible hosts.

What are the Symptoms of VS?

The incubation period for vesicular stomatitis ranges from 2 to 8 days. Excessive salivation is often the first sign. Body temperature may rise immediately before or at the same time that blister like lesions first appear in the mouth and dental pad, tongue, lips, nostrils, hooves, and teats. These blisters swell and break, leaving raw tissue that is so painful that infected animals generally refuse to eat or drink and show signs of lameness.

The virus can spread rapidly in the herd, and up to 90% of the animals show clinical signs and nearly all develop antibodies.

Severe weight loss usually follows

- **In horses, these lesions generally occur on the upper surface of the tongue.**
- **In cattle, the lesions usually appear on the hard palate, lips, and gums, sometimes extending to the muzzle and nostrils.**
- **Dairy cattle, also, often suffer from teat lesions, a severe drop in milk production and subsequent mastitis.**
- **Affected pigs usually first show signs of lameness caused by foot lesions.**

The morbidity rate for vesicular stomatitis varies considerably within species. If there are no complications such as secondary infections, then affected animals recover in about 2 weeks. Vesicular stomatitis does not generally cause animals to die.



How is VS Diagnosed?

All suspicious cases are treated with high priority response by animal health officials. Samples are submitted to NVSL for rapid diagnosis by virus detection and antibody levels in the bloodstream.

How is the Virus Transmitted?

Direct contact and infected feed and water are primary means of disease spread. Small black gnats of *Culicoides* sp. can transmit this disease by feeding on an infected animal and subsequently feeding on a susceptible animal. Other biting flies like sand flies, black flies and mosquitoes also transmit the disease when they bite susceptible animals. Movement of infected animals in commerce or pleasure easily spreads the disease.

Does VS Affect Humans?

Humans can become infected with vesicular stomatitis when handling affected animals if proper biosafety methods are not followed. Prevalence of this disease in humans may be underreported because it may often go undetected or may be misdiagnosed. In humans, vesicular stomatitis causes an acute influenza-like illness with symptoms such as fever, muscle aches, headache, malaise and blisters in the mouth. The disease course is 4 to 7 days.

How is VS Treated?

There is no specific treatment or cure for vesicular stomatitis. Mild antiseptic mouthwashes may bring comfort and more rapid recovery to an affected animal.

Can I Protect My Livestock?

No vaccines are available in the United States. Owners can protect their animals from disease by avoiding congregation of animals in the vicinity where vesicular stomatitis has occurred. Movement of animals, trucks, trailers and other fomites of contact should be restricted. Good sanitation and quarantine practices on affected farms usually contain the infection until it dies out. There is no approved vaccine for VS in the US.

Are Disinfectants Effective to Kill the Virus?

Yes, 2% sodium hypochlorite; 4% sodium hydroxide; 2 % iodophor disinfectant and chlorine dioxide disinfectants.

Where is VS Found?

Classic VS has been confirmed only in North and Central America and the northern part of South America. Sporadic outbreaks occur in the Southwestern US. During an outbreak in 1982, VS was confirmed on a premises in South Dakota. (Proceedings: USAHA 1984)



Why is there So Much Concern About VS?

VS is very similar in its clinical appearance to Foot and Mouth Disease (FMD), so it is important to determine if, in fact, it is VS and not the more serious foreign animal disease, FMD.

Is VS a Reportable and Quarantinable Disease?

YES! Veterinarians and livestock owners who suspect an animal may have vesicular stomatitis or any other vesicular disease should immediately contact State or Federal animal health authorities.

Recommended Actions

When a definite diagnosis is made on a farm, the following procedures are recommended:

- Separate animals with lesions from healthy animals, preferably by stabling. Animals on pastures apparently are affected more frequently with this disease.
- As a precautionary measure, do not move animals from premises affected by vesicular stomatitis, unless they are going directly to slaughter—for at least 30 days after the last lesion found has healed.
- Implement on farm insect control programs that include the elimination or reduction of insect breeding areas and the use of insecticide sprays or insecticide-treated ear tags on animals.
- Use protective measures when handling affected animals to avoid human exposure to this disease.

Don't Stall: Report Vesicular diseases immediately!

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