



Livestock Notifiable Disease Factsheets Vesicular Stomatitis

If you suspect signs of any notifiable disease, you must immediately notify a Defra Divisional Veterinary Manager.

Animals affected

Cattle, pigs and horses

History and spread of the disease

Vesicular diseases of swine can be caused by infection with foot-and-mouth disease, swine vesicular disease, vesicular stomatitis, and vesicular exanthema of swine or San Miguel sea lion. A vesicular disease was first reported in Italy in 1546: it is likely that this was foot-and-mouth disease.

Vesicular stomatitis was first recognised in horses in the American Civil War, although infection in swine was not reported until 1943. This disease is distributed in North, Central and South America. Transmission is by biting flies.

Clinical signs

This disease is clinically indistinguishable from FMD and laboratory diagnosis is necessary. Generally within one to five days after exposure the body temperature rises to 40.5 degrees centigrade or higher. Areas of epithelium become blanched, followed by the formation of vesicles on the snout of pigs, on the lips, tongue, hard and soft palate and the coronary band. Lesions may also occur in other areas of the skin, especially where there is abrasion of tissue. The vesicles yield a serous fluid as they burst, usually 6 to 24 hours after formation. The hoof may become detached if vesicles have gathered there. Mortality rates are moderate to low.

Post-mortem

Again, this is similar to FMD. The lesions begin in the stratum spinosum where vesicles form as a result of intercellular edema and necrosis of the keratinocytes, which become spherical and float as single or clustered cells in the vesicular fluid.

Histopathology is similar in cattle and swine. The lesions develop in the stratum germinativum with intercellular edema that stretches the intercellular bridges (desmosomes). The cells remain attached at the ends parallel to the stratum germinativum but are separated lengthways by intercellular edema, giving a "Japanese lantern" appearance.

The stratum basale essentially remains intact but has a tendency to be somewhat disrupted by the VESV infection.

EU Directive 92/119 includes control measures for this disease.

Pictures of the disease



Blanched areas on the hard palate, dental pad and gums.



Ruptured vesicles on the palate.

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