# Swine vesicular disease

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## Nature of the disease

Swine vesicular disease (SVD) is an acute highly contagious virus disease of pigs caused by a virus of the Picornaviridae family from the Enterovirus genus, serotype 9. The disease is characterised by the formation of vesicles on the feet, lower limbs and snout. The disease is important because it is clinically indistinguishable from FMD.

## Classification

OIE List A disease

## Susceptible species

Pigs are the only domestic species known to be clinically affected. Human cases have been reported.

## Distribution

The disease was first recognised in Italy in 1966. In the 1970s outbreaks occurred in Hong Kong, Britain, Austria and Poland, Japan and Taiwan. Since then it seems to have been eradicated from most places and according to OIE, in 2002, only Italy was infected.

## Clinical signs

The disease is moderately contagious and mortality is negligible.

## Post-mortem findings

These are restricted to the vesicles and their aftermath.

# Differential diagnosis

## Specimens required for diagnosis

Any vesicular disease in pigs should be regarded as possible FMD until proven otherwise. Recent or concurrent disease in other species (cattle, sheep, goats, etc) should also be investigated. Although the virus is relatively stable, samples should be sent with the same precaution as for FMD.

Virus identification can be done via ELISA, direct complement fixation test, cell culture isolation and DNA probe with PCR. Specimens include:

Serum for serological evidences can be also submitted, techniques include ELISA and Virus neutralisation (prescribed by OIE)

# Transmission

SVD virus is highly resistant to inactivation. Outbreaks usually begin with pigs being exposed to feed containing infected pork products, for instance the virus can survive for 560 days in lymph nodes in ham. Swill feeding has been responsible for most primary and recurrent outbreaks.

Disease will spread rapidly by direct contact. Movement of preclinical or mildly infected pigs is the major factor in secondary spread.

Indirect spread via materials or equipment contaminated with infected faeces and urine can occur sporadically. Effluent from infected piggeries is a potential source of infection for other pigs.

Spread by semen and embryos, is considered unlikely if correct handling and transfer procedures are followed.

# Risk of introduction

The most likely source of entry of SVD is via contaminated pork products being fed to domestic pigs or to which wild pigs get access. Garbage from aircraft and ship should be destroyed and swills should be sterilised if they are to be fed to pigs.

Risk analysis must be done before importation of pig and pig product from countries where SVD occurs.

# Control / vaccines

There are no commercial vaccines experimental vaccines have been developed.

Because this disease can be confused with FMD, the aim should be to eradicate it. Eradication involves the depopulation of infected herds with disinfection of premises with strong alkalies. Repopulation should be partial and should be done 3 months after depopulation. Control of pig movements, sterilisation of swills and fomites are essential to successful eradication.

Contamination via effluent from neighborhood piggeries should also be considered.

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Yes