



SOUTH PACIFIC COMMISSION

HOG CHOLERA



Pigs "huddling" and showing depression and conjunctivitis in the early stages of hog cholera

HOG CHOLERA, also known as **European Swine Fever** or **Classical Swine Fever**, is usually seen as an acute infection of pigs which is characterised by fever, haemorrhages and ultimately death.

Hog cholera has been reported in the region on a number of occasions by Australia (1962), French Polynesia (1972), New Zealand (1953) and Kosrae in the Federated States of Micronesia (1975). The origin of the Kosrae outbreak was traced to the introduction of meat by a returning seaman. The disease was controlled and eventually eradicated by the compulsory slaughter of every pig on the island.

The disease is widely distributed through parts of Europe, Asia, Central and South America. The potential for the introduction of hog cholera represents the greatest threat to animal production in the region.

Infection

Hog cholera is caused by a *Pestivirus*. There is only one type of hog cholera although there are a number of strains which vary in their effects. The virus is quite stable and can survive in certain pig meat products for months and in frozen carcasses for years. Only domesticated and wild pigs are susceptible to infection.

Infection takes place through the inhalation or ingestion of the virus following close contact between infected and healthy pigs. Feeding of pig-meat scraps which contain the virus can also cause infection. The virus is capable of crossing the placenta in infected sows, to infect the piglets during gestation.

Clinical Signs

Acute cases of hog cholera are seen after an incubation period of between three and ten days. The first symptoms are usually high fever, loss of appetite, and depression where affected pigs huddle together. In the early stages the pigs may be constipated, but this soon changes to diarrhoea and vomiting. Conjunctivitis becomes very obvious and the eyes maybe stuck closed. Discoloration of the skin begins over the abdomen and there is necrosis (tissue death) of the skin at the ear tips and tail. Disturbances of the central nervous system are common which result in circling, loss of co-ordination, paralysis of the hind legs and convulsions. Pregnant sows frequently abort. The mortality among infected animals can reach 90 per cent.

Chronic cases develop in pigs which survived the acute form or in those animals which never exhibited signs of infection. Affected pigs may survive for months and suffer from recurrent attacks of fever, loss of appetite, depression and ultimately death.

Pigs which become infected in the uterus and survive may be weak or deformed. Some appear to be healthy, but remain carriers of the virus and therefore a source of further infections.

Diagnosis is confirmed by virus isolation from samples of blood, tonsil, kidney, brain, spleen, ileum, and submandibular and mesenteric lymph nodes.

Pigs which recover from infection are immune for life, although pigs which were infected in the uterus do not develop antibodies.

Post-mortem Findings

Large areas of haemorrhage may be present in the lining of the intestine, lungs, spleen, lymph nodes and kidneys, while small haemorrhages (petechiae) are widespread. Chronic cases may show evidence of pneumonia with fibrin strands and small button ulcers in the intestinal lining near the ileo-caecal junction.

Differential Diagnosis

Hog cholera closely resembles infection with African swine fever virus and differentiation can only be performed in a laboratory. African swine fever is largely restricted to the African continent and parts of Southern Europe. The presence of hog cholera in Asia represents a greater threat to the Pacific and is more likely to be the source of an outbreak.

Other diseases which are present in the region and may be initially confused with hog cholera are acute septicaemia and Aujeszky's disease. Warfarin poisoning also causes similar symptoms.

Control

Freedom from hog cholera is maintained through the strict control of imports of live pigs and pig-meat products. The importation of live animals from infected areas should be banned. If possible the feeding of uncooked swill should be prevented, although this would be very difficult for the smallholder. Control of imports will reduce the risk of infected material being fed to pigs.

In many countries where an outbreak of the disease occurs, control and eradication is achieved by applying a total slaughter or 'stamping out' policy for infected herds. In some cases (Kosrae) it may be simpler

to slaughter the entire population of an island. Due to the economic and cultural significance of pigs in some countries, this may be very difficult to apply.

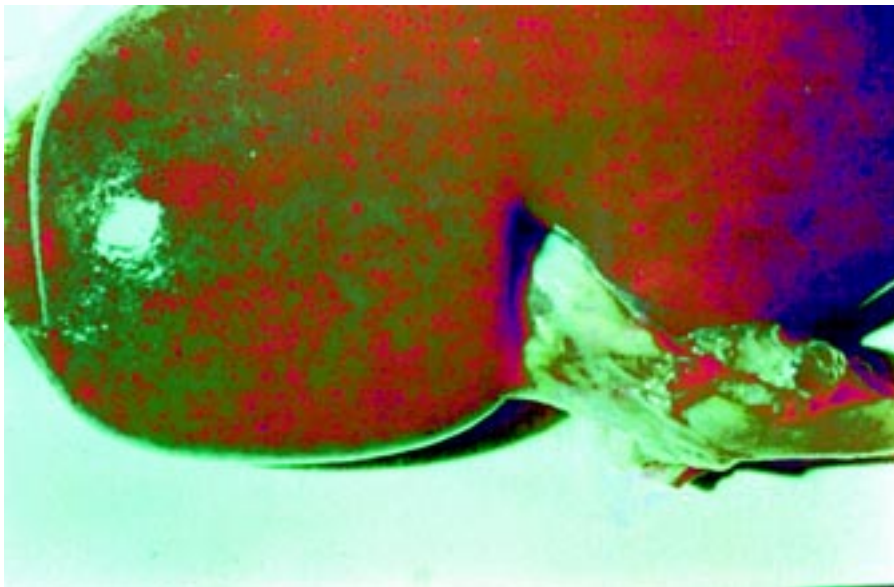
In countries where the disease has become established, losses can be controlled through vaccination.

Treatment

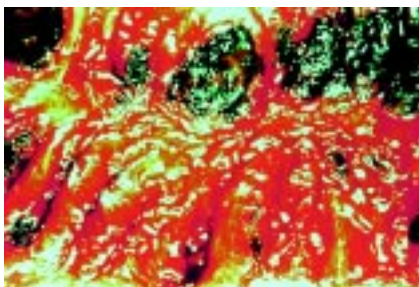
There is no treatment for hog cholera.

Public Health

There is no public health risk from hog cholera. However pigs which have died from the disease should not be used for human consumption.



Kidney with small haemorrhages (petechiae) on the surface typical of hog cholera.



Button ulcers in the intestine as a result of infection with hog cholera

This leaflet was prepared by Peter Saville, Animal Health Adviser, South Pacific Commission, Suva, Fiji, from whom further information can be obtained. The photographs were provided by the Australian Quarantine Inspection Service, Department of Primary Industries & Energy, GPO Box 858, Canberra, ACT 2601, Australia.

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