African Swine Fever

African Swine Fever

Definition

A contagious infectious disease affecting wild and domestic pigs, caused by an as yet unclassified DNA.

Affected species

Solely domestic and wild pigs.

Pathogens

Unclassified DNA virus (African swine fever-like virus). Resistant outdoors, in animal products and to low temperatures.

Modes of transmission

Sources

Transmission

Penetration may be via the digestive or respiratory systems or the skin.

Symptoms

peracute form
: "white plague", high fever, affected animals die before they have time to show signs of haemorrhaging.

classical acute form
: fever (40-42°C) and prostration for two days, leucopenia and thrombopenia in the initial stages and then various signs depending on the organs affected.

Death

within anything between a few days and three weeks.

asymptomatic form
: very common among warthogs and river hogs (not in wild boars), which act as a reservoir.

Lesions

Macroscopic and microscopic.

They resemble those of classical swine fever.

Haemorrhagic lesions

1. lymph nodes and tonsils: hypertrophy and haemorrhagic lesions
2. kidneys: "turkey's egg" ecchymoses
3. spleen: infarction and splenomegaly
4. skin: ecchymoses, sometimes necrosis
5. bladder: ecchymoses
6. lungs and trachea: petechiae

Ulcers

In the digestive tract, particularly the caecum and colon. The ulcers are flat and non-perforating, except in the event of bacterial secondary infection ("boot button ulcers").

Leucopenia

haemorrhage on kidney.	haemorrhage on kidney.
Congestion and haemorrhage on mesenteric nodes.	Hypertrophic spleen.

Diagnosis

Clinical diagnosis

Suspicion of swine fever, but impossible to distinguish between classical swine fever and African swine fever

Differential diagnosis

African swine fever should not be confused with :
1. classical swine fever
2. erysipelas
3. salmonellosis
4. pasteurellosis
5. septicaemic infections

Laboratory diagnosis on live animals

Virological diagnosis :

On organs (spleen, kidneys, ganglions, tonsils) or blood with an anticoagulant: virus isolation on pig leucocytes with virus identification by immunofluorescence or haemadsorption inhibition (Malmquist test), or by PCR.

Serological diagnosis on blood (dry tube) :

If virus isolation fails, particularly for chronic forms. Eight to 21 days after infection, in convalescent animals, by immunofluorescence or ELISA.

Adsorption de globules rouges sur des macrophages de porcs infectés par le virus PPA (test de mise en évidence du virus).	Mise en évidence directe par immunofluorescence du virus PPA sur un frottis de rein.

Mise en évidence du virus PPA dans des cellules infectées par immunofluorescence indirecte. Mise en évidence du génome du virus PPA par PCR (dilution de 10 en 10).	Mise en évidence d'anticorps sériques spécifiques du virus PPA par western blot (à gauche : sérum positif; à droite : sérum négatif).

Treatment

Prophylaxis

Prophylaxis is entirely sanitary (there are no vaccines or treatment)
1. In infected countries: control of pig movements, identification of pigs and tick control
2. In the event of an outbreak: culling of all pigs and destruction of carcasses, then disinfection of the site
3. In unaffected countries and in general: ban the use of non-sterilized swill, ban imports of pigs or meat products from infected countries.

More information

Yes