Post mortem findings

Carcasses of pigs that die in the acute stage of the disease are often in good condition. In white-skinned pigs, bluish-purple discolouration of the skin of the extremities and the chest and abdomen, sometimes with multiple haemorrhages, may be seen. Bloody froth may issue from the nose and mouth; there may be a discharge of pus from the eyes; the tail and area under the tail may be soiled with bloody faeces. When the carcass is opened, the following may be seen:

- fluids in the chest and abdominal cavities, which may be blood-stained;
- widespread bleeding over organ and body surfaces;
- congestion of organs and carcass;
- enlarged spleen;
- enlarged lymph nodes containing a lot of blood which may resemble blood clots;
- the lungs do not collapse when the chest is opened, appearing

**FIGURE 8**

**Cutaneous haemorrhage**

Widespread haemorrhages may occur in the skin.
heavy and shiny, with prominent divisions between lobules and oozing moisture and froth when cut;
• the trachea is usually filled with froth, which may be blood-stained;
• pinpoint haemorrhages on the surface of the kidneys;
• haemorrhages and sometimes ulcers in the stomach lining;
• the intestines may be congested and the contents may be bloody.

**Post mortem findings**

*FIGURE 9*

**Fluids in body cavities**

_Blood-tinged fluid often accumulates in the body cavities._
Internal haemorrhages
Haemorrhages may be visible in multiple organs and on the serosal linings of the body cavities.

Enlarged spleen
The spleen is often markedly enlarged and dark in colour.
Lung oedema is present, indicated by a moist appearance, failure to collapse and a marked lobular pattern owing to accumulation of fluid in the interlobular septa.

Enlarged and haemorrhagic mesenteric lymph nodes.
Recognizing African swine fever

FIGURE 14

Haemorrhages in kidneys
Pinpoint to larger haemorrhages on the kidney capsule.

FIGURE 15

Haemorrhages in stomach
Haemorrhages in the fundus of the stomach.
**FIGURE 16**

**Haemorrhagic intestines**
*Intestines cut open to demonstrate bloody, fluid contents.*

**FIGURE 17**

**Haemorrhagic infarcts in spleen**
*Multiple infarcts along the edges of the spleen, which is not strikingly enlarged.*
Subacute ASF may be characterized by the following changes:
- fluids may be present in body cavities (heart failure);
- lymph nodes are enlarged and often haemorrhagic;
- fibrin may be present on the surfaces of the lungs and the heart;
- lungs may be firm with a mottled appearance, due to pneumonia;
- joints may be swollen with accumulated fluid and fibrin.

Chronic ASF is characterized by:
- emaciation;
- sores and ulcers over bony points;
- lymph nodes are enlarged and firm;
- a layer of fibrin may be present over the lungs and heart;
- swollen joints.
Differential diagnosis

Few diseases of domestic pigs cause mortality at the rate observed in an acute ASF outbreak in newly infected pig herds. The most important differential diagnosis for ASF is classical swine fever (hog cholera), which is caused by a completely different virus but presents almost identical clinical signs and post-mortem lesions. The only way to distinguish reliably between classical swine fever and ASF is by identifying the virus. Post-mortem lesions that have been used to distinguish between the two diseases, such as ulcers in the area where the small and large intestines meet and areas of bleeding and tissue destruction in the spleen, are known as infarcts (Figure 16). These are variably present and not reliable. It is unwise to attempt vaccination against classical swine fever until the diagnosis is confirmed, as ASF can easily be spread during a vaccination campaign.

Excessive mortality may be difficult to judge in small pig herds, where four out of five pigs may die from a variety of causes, including parasitism and malnutrition. When a significant number of pigs in any herd or group die, it is advisable to find out whether any other pig owners in the area have experienced similar recent losses. Other diseases that may be confused with ASF are as follows:

**Erysipelas**
This is a bacterial disease and is known as one of the “red fevers”. Pigs of all ages may be affected, and the disease is as likely to affect small-scale and extensive pig farms as commercial, intensive units. Mortality is usually much lower than in ASF and there are usually some pigs that will show the typical diamond-shaped skin lesions. Pigs respond well to treatment with penicillin. Bacterial isolation will confirm the diagnosis. The microscopic changes differ from those typical of ASF.

**Salmonellosis, septicaemic pasteurellosis and other bacterial septicaemias**
Features in common with ASF include fever, loss of appetite, respiratory or gastro-intestinal disorders and a congested, fevered carcass at slaughter. Pigs of a particular, typically younger, age group are usually affected. Animals treated in time may respond to antimicrobial therapy. Confirmation of the diagnosis is by culture of the bacteria.
Trypanosomosis

Trypanosomosis is caused by blood parasites that are transmitted by tsetse flies. Many deaths among pigs of all ages can occur and the pigs may die too quickly to develop typical signs of anaemia (lack of blood) or icterus (jaundice). This disease is so severe that pigs are seldom produced in areas where it occurs. The parasite is easily demonstrated on blood smears stained with Giemsa or Romanoff stains (e.g. diff quick).

When a large number of pigs die suddenly, the possibility of poisoning should be considered. Few poisons result in the severe bleeding seen in ASF. Coumarin-based rat poisons such as warfarin can cause widespread bleeding but are unlikely to affect more than a few pigs in a herd. Certain fungal poisons found in mouldy feed, such as aflatoxin and stachybotryotoxin, may cause haemorrhage and severe mortality.