

The First African Swine Fever Diagnosis Report of Jiangsu

China Animal Quarantine, 2018

Chinese Veterinary Release

CHINA 2018 ASF CLINICAL HISTORY

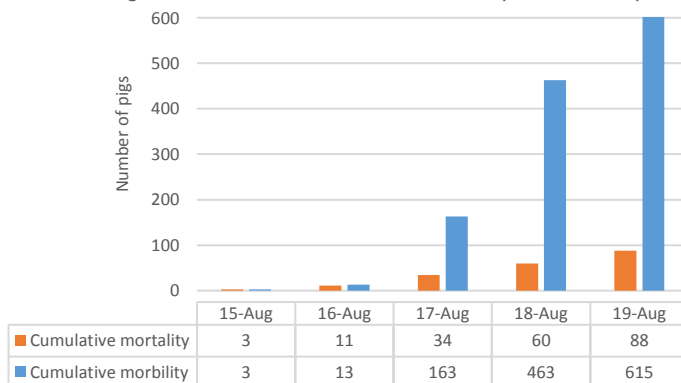
Editor's Note: The epidemiology, clinical signs and pathological changes of the African swine fever outbreak in Lianyungang, Jiangsu Province show the characteristics of typical African swine fever. This paper provides information to guide the current investigation of the outbreak.

On August 18, Jiangsu Animal Disease Prevention and Control Center received a report from the Lianyungang Animal Disease Prevention and Control Center, claiming that pigs in a pig farm in the city died of African Swine Fever based on epidemiology, clinical signs and necropsy findings. According to the relevant requirements, samples from three sick pigs were collected and sent to the China Center for Animal Health and Epidemiology for diagnosis, and finally confirmed as African swine fever.

Clinical history

A finishing farm in Haizhou District, Lianyungang City, Jiangsu Province, housed 4,626 pigs in four barns. Pigs were introduced into one of the houses, the No. 2 finishing barn, on May 17 and May 21, 2018, with 560 head added each time. At 7 AM on August 15, three pigs in this barn were observed recumbent with fever (41-42°C) and bloody feces. The pigs were treated with Antondine (analgesic and antipyretic) and penicillin and died in the afternoon. On August 16, 10 pigs were sick and eight died; on August 17, 150 pigs were sick and 23 died; on August 18, more than 300 pigs were sick and 26 died. By August 19, cumulatively 615 pigs were sick, and 88 died (Figure 1). When pigs were culled on August 19, pigs in barns 1, 3 and 4 were clinically normal.

Figure 1. ASF outbreak cumulative morbidity and mortality



Clinical and pathological diagnosis

In this outbreak, the clinical signs and pathological changes in sick pigs were typical of acute African Swine Fever.

Clinical signs

At the onset of clinical disease, pigs had a fever of 41-42°C, appeared jaundiced, had difficulty breathing, and were reluctant to exercise. Some pigs had bloody discharges, incoordination, and neurological signs such as convulsions, recumbency and paddling (Fig. 2).



Figure 2-1. Jaundiced pig



Figure 2-2. Lethargic, sick pigs



Figure 2-3. Sick pigs piling

Anatomical pathological changes



Figure 3-A. Enlarged purple-brown spleen



Figure 3-B. Lung bronchus filled with exudate



Figure 3-C. Bloody effusion in the abdominal cavity



Figure 3-D. Swollen kidney cut longitudinally



Figure 4A. Swollen and hemorrhagic mesenteric lymph nodes

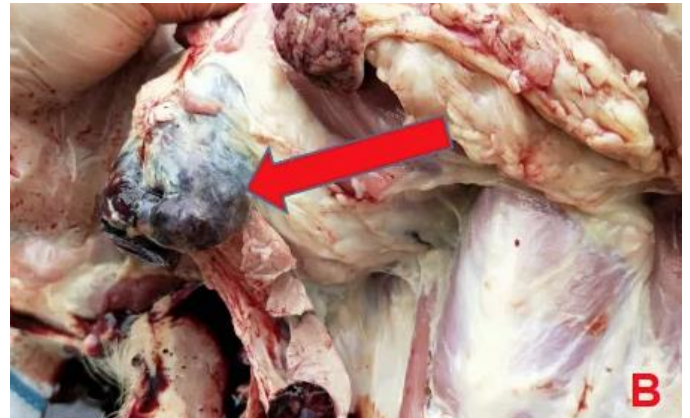


Figure 4B. Swollen and hemorrhagic mandibular lymph node

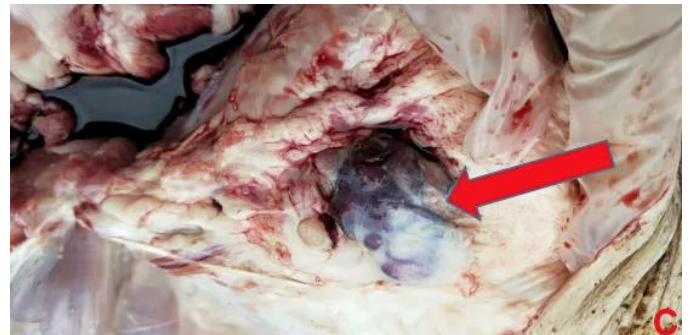


Figure 4C. Swollen and hemorrhagic inguinal lymph node



Figure 4D. Hemorrhagic lymph node cut longitudinally



Figure 5A. Hemorrhage of gastric mucosa

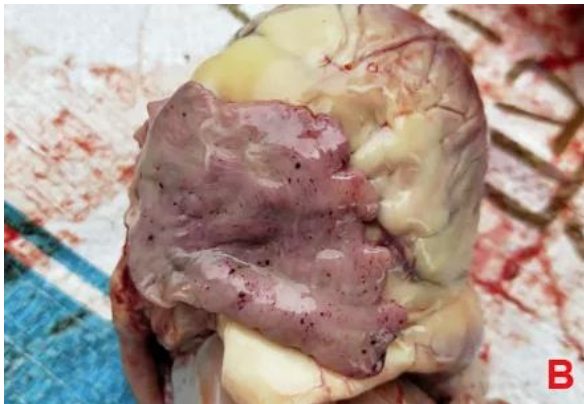


Figure 5B. Petechial hemorrhage of epicardium



Figure 5C. Petechial hemorrhage of intestinal serosa



Figure 5D. Hemorrhage of intestinal mucosa

Sample submission and diagnosis

According to the "Technical Specifications for Prevention and Control of African Swine Fever (Trial)" and "Emergency Plan for African Swine Fever", 10 samples of whole blood and three spleens, lymph nodes, kidneys and lungs were collected and submitted to the China Center for Animal Health and Epidemiology, National Center for Animal Disease Research, where African Swine Fever was confirmed.

Outbreak response and monitoring

In accordance with the "Technical Specifications for the Prevention and Control of African Swine Fever (Trial)" and the "Emergency Response for African Swine Fever Outbreak", actions such as blockade, culling, euthanasia and disinfection shall be adopted for the affected sites and zones. All susceptible animals and animal products such as pigs are prohibited from entering or exiting the blockade. At present, all pigs in the affected areas have been culled and euthanized. The screening of ASF in the areas at risk has been working through, and no new cases have been found yet.

Summary

This was the first African swine fever case in Jiangsu Province. As of the culling on August 19, except for the No. 2 barn, pigs in other barn were clinically healthy, suggesting that direct contact between normal pigs and sick pigs is the most important cause of African Swine Fever virus transmission. The clinical signs and pathological changes were consistent with the acute pathogenesis of African Swine Fever, which provides a reference for the final diagnosis of African swine fever, and provides a basis for detection of suspected cases of swine fever in Africa. The investigation of this outbreak has a positive guiding significance. By taking corresponding measures, the outbreak has been effectively controlled and the investigation of the source of outbreak is still going on.

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