Case Report: Report on the First African Swine Fever Case in Greece
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Main Points:
- In February 2020 the first African Swine Fever (ASF) case in Greece was diagnosed in a backyard swine farm.
- Clinical symptoms were vague and necropsy findings could be attributed to other conditions, including ASF.
- In areas neighboring high ASF-risk areas, ASF should always be included on the differential diagnosis, even in cases with mild symptoms, due to the high mortality rate and acute spread that ASF poses.

Introduction: Greece is a country in Southeastern Europe with three land borders adjoining Albania, Macedonia, and Bulgaria. ASF was present in Bulgaria in November 2019 and Greek authorities established protection and supervision zones in two regional units next to the Bulgarian borders. On February 3rd, 2020, an 8-month-old gilt was admitted to the Laboratory of Pathology at the Aristotle University of Thessaloniki School of Veterinary Medicine for necropsy. Results of the necropsy showed signs of a hemorrhagic and septicemic disease consistent with ASF. Confirmatory testing was then performed by the National Reference Laboratory for African Swine Fever located in Athens. Positive results were obtained, confirming this as the first positive case of ASF in Hellas on February 5.

Postmortem Examination: When the gilt was necropsied, external examination showed no changes except peripheral lymph node enlargement. There were a few pinpoint hemorrhages of the epiglottis and tonsils were slightly hyperemic. Lymph node enlargement with hemorrhage was also noted throughout. Severe pulmonary edema was indicated by white frothy fluid found up to the larynx region, and a small amount of serosanguineous fluid was found around the heart and in the abdominal cavity. Petechial and ecchymotic hemorrhages were present on and in the heart and gallbladder, with blood clots present in the gallbladder. The spleen was markedly enlarged and pale. Other findings included linear serosal hemorrhage of the stomach along with gelatinous edema is some parts. Finally, the kidneys also showed scattered petechiae.

Clinical Presentation: Reports showed the animal submitted for necropsy had died after 6 days showing generalized respiratory clinical symptoms (anorexia, weakness, and dyspnea). Six other domestic pigs from the same farm had died in the past two weeks and 3 more were sick with similar clinical signs. The animals had been treated with antibiotics due to what was thought as a respiratory disease. These animals had been kept in an olive grove in two adjacent, but separate fenced holdings. Holding 1: Housed unit consisting of 1 boar, 4 sows, 13 piglets, and 13 fattening pigs. Holding 2: Open-air unit in an olive grove for foraging, surrounded by an electrical fence.

Animals were fed corn from local producers and foraged in the olive grove. Animals were not purchased from external sources during past two years, and the nearest backyard farm was empty. Kitchen or food leftovers were identified in the olive grove and there is the hypothesis that contact between animals and foreign personnel from a nearby greenhouse may have occurred due to the food waste found in the olive grove. All remaining animals present at the farm were euthanized.

Laboratory Testing: Testing was done on the remaining animals at the case farm following OIE guidelines and the results were as follows: ELISA testing for ASF antigen – 7 out of 30 positive; PCR-based testing – 12 out of 13 fattening pigs positive; ELISA testing for anti-ASFv antibody – 2 out of 31 positive (+1 inconclusive).

Conclusion: Due to the various strains and virulence, clinical symptoms may not always be extreme or have noticeable differentiation between other septicemic or hemorrhagic diseases. In this clinical case presentation, the clinical signs did not show any skin erythema or cyanosis that is sometimes associated with ASF. Therefore, necropsy was a key component in diagnosis. Every effort should be made to perform a necropsy when disease etiology is unknown. Finally, due to the high mortality rate and rapid spread of this disease, having it on the differential diagnosis list is important, especially if found in neighboring areas.

The full report can be found at: https://www.mdpi.com/2306-7381/8/8/163