International Pig Topics'
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16 – Enzootic pneumonia – II

Pathogenesis

Under natural conditions the incubation period of this disease is a few days either side of a fortnight, that is 10-6 days, but observations from the field suggest that exceptions to this occur. The disease has been seen in pigs as young as two weeks of age but in such scenarios spread is usually slow and a severe, overt presence is not apparent until 3-6 months of age. Typically, enzootic pneumonia is a chronic disease with low mortality and high morbidity.

In the early stages of this disease large numbers of mycoplasmas can be seen on the lining of the respiratory tract from the trachea down to the bronchioles and then the pneumonia develops as a result of a variety of serious reactions involving the mycoplasma. In the field virtually all cases of enzootic pneumonia are mixed infections of mycoplasmas, viruses, bacteria and even nematodes. It has been shown that M. hyopneumoniae pneumonia can pre-dispose pigs to pneumonias caused by Pasteurella multocida or Actinobacillus pleuropneumoniae. Interactions between M. hyopneumoniae and PRRS virus are involved in the pathogenesis of PRDC.

Clinical signs

Typically, pigs show a chronic non-productive cough (that is, one not producing mucus etc) that has a slow onset but usually last for weeks or months. However, some affected pigs show little evidence of coughing. Respiratory movements only occur in the severest cases or cases with secondary bacterial involvement. Deaths usually only occur when there is secondary bacterial infection and/or stress and usually occur at 4-6 months of age.

Growth can be depressed and stunting can occur but appetite remains unaffected.

Lesions

Typical lesions of enzootic pneumonia are those of areas of grey or purple consolidated lung material that are in the lower regions (ventral) of the cranial and middle lobes, the accessory lobe and the front part of the caudal lobes of the lungs. Early on there is a catarrhal exudate in the bronchioles and bronchi. Associated lymph nodes are enlarged.

Diagnosis

Diagnosis is based on history, clinical signs and post-mortem findings with confirmation by blood test or the presence of M. hyopneumoniae in lung tissue by immunofluorescent antibody techniques. M. hyopneumoniae is difficult to isolate by culture and type so this is not often undertaken.