

Enzootic pneumonia of pigs

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Nature of the disease

A disease commonly seen in growing and finishing pigs caused by infection with *Mycoplasma hyopneumoniae*. The disease is highly contagious, reduces feed conversion efficiency and predisposes pigs to more acute pneumonia. It is considered a major cause of economic loss in the pig industry.

Classification

SPC List D disease

Susceptible species

M. hyopneumoniae only affects pigs.

Distribution

Enzootic pneumonia is widely distributed, and occurs in virtually all the major pig raising areas of the world. It is widely distributed within countries.

Clinical signs

Secondary infections are common. There are a number of bacteria, viruses and mycoplasmas, which can infect the lung, particularly after enzootic pneumonia has started. These include *Psp.*, *Streptococci spp.* and *Actinobacillus pleuropneumoniae*. *Haemophilus parasuis* (Glasser's disease) also plays a contributing role in post-weaning respiratory disease.

Once the disease enters the lung it causes areas to collapse and the pig progressively becomes short of air. The collapsed areas become infected with other diseases and the pig finally succumbs to the disease load.

Post-mortem findings

At post-mortem, the lungs appear congested, heavy and oedematous with gray areas of consolidation. Bronchial and mediastinal lymph nodes are often enlarged.

Findings may be complicated by secondary bacterial infections e.g. *Pasteurella multocida*.

Differential diagnosis

Other cause of respiratory disease in pigs include:

Specimens required for diagnosis

Enzootic pneumonia can be suspected when there is a sporadic dry cough in weaners and growers.

Samples of lung tissue can be collected for histopathological and bacteriological examination to rule out other causes. However, isolation of *M. hyopneumoniae* is difficult with mycoplasmas requiring special culture and identification techniques. Fluorescent antibody technique can also be performed from impression smears of the cut lung.

Blood samples can be submitted for serological tests based on ELISA, complement fixation and indirect hemagglutination.

Transmission

The disease is transmitted between pigs via direct contact and aerosols. Dust and fomites may also spread the disease. Wind-borne spread from infected farms to adjacent farms within 5 km can occur. Environmental and management factors are essential in the epidemiology of the disease, level of ammonia in the air, ambient temperature, stress, poor nutrition can favor the disease.

On infected farms, the disease is transferred from the sow/gilt to her offspring and more importantly by droplet spread from coughing pigs.

Risk of introduction

The most likely route of introduction of enzootic pneumonia is through importation of infected pigs. The disease is widely distributed and occurs in most major pig raising areas of the world.

Control / vaccines

Where the disease is widespread, control and treatment is complicated. Antibiotics (e.g. spectinomycin, tetracyclines and tylosin at 200mg/kg for 5-10 days) limit the effects of the disease without providing a totally successful recovery.

Eradication is difficult both practically and economically as herds can be re-infected quickly.

In endemic situations, practical control of the disease can be achieved with a high standard of management, good nutrition, stable temperature control, adequate ventilation, reduction in dust, and avoidance of stress. In some cases eradication is the best option.

In small herds, isolated farrowing techniques gives good results. It consists in keeping litters separated and in inspecting piglets during life and at slaughtering. Every litter where there are sick animals are eliminated from the programme.

Enzootic pneumonia vaccines are now available and will significantly help to reduce the effect of the disease. On many farms this helps the farm to retain or regain its competitiveness.

References

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