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Enzootic pneumonia



Introduction and aetiology

In the mid-1960s the first isolations of a micro-organism known as mycoplasma were made from pigs' lungs with pneumonia. This mycoplasma, subsequently named *Mycoplasma hyopneumoniae* could reproduce the pneumonia if it was used to infect pigs – hence the cause and effect relationship was demonstrated. Prior to this the pneumonic disease, which was now known to be caused by a mycoplasma, had been seen in many countries.

In the mid-1990s two important discoveries about *M. hyopneumoniae* were made. Firstly, it was discovered that *M. hyopneumoniae* had a marked ability to change its surface antigens which has important implication when it comes to control. Secondly, evidence of heterogeneity or diversity was found between existing isolates of *M. hyopneumoniae*.

Epidemiology

The role of carrier pigs is important in the epidemiology of enzootic pneumonia and new outbreaks of this disease are often associated with the introduction of carrier animals, such as breeding stock, into a susceptible herd.

Transmission is mainly via respiratory tract excretions such as nasal discharge. The disease can move easily between pigs in a group, but does not necessarily always do so. The disease can get into isolated herds and this usually occurs when the source and recipient herds are 3km or less apart and during the winter months. In these instances airborne transmission has occurred.

In continuously stocked farms, *M. hyopneumoniae* regularly moves from older to younger pigs thereby perpetuating the disease on that farm. Slaughter surveys of pigs from infected herds often show 30-80% of slaughter age pigs with lesions of enzootic pneumonia. Interestingly, in countries where control measures have been introduced, this figure is significantly reduced. For example, the Dutch reduced an incidence of about 25% to one of 5% over a decade at the end of the last century.

M. hyopneumoniae, as well as various other respiratory pathogens, is regularly isolated from outbreaks of chronic pneumonia.

Economic losses

Economic losses due to enzootic pneumonia are those arising from reduced weight gain and poorer FCRs. Growth rate is often reduced by 12-15%. However, there is not a strong correlation between prevalence and severity of lung lesions and adverse effects on performance. This suggests that other factors, such as environment, feed, management and genetics, play a significant role.

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