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58 – Bordetellosis III

Post mortem findings

Although B. bronchiseptica can colonise throughout the respiratory tract, lesions tend to be confined to the nasal cavity (rhinitis) and lungs (suppurative bronchopneumonia).

Nasal cavity lesions range from mild exudation to moderate turbinate atrophy. Distortions to the snout are not normally seen with uncomplicated infections of B. bronchiseptica and in most cases regeneration of the turbinates occurs.

Lung lesions will progress from acute red discolouration to plum coloured, clearly defined, anterior ventral consolidated areas, through to fibrotic chronic lesions.

Diagnosis

Diagnosis is based on clinical signs, post mortem findings and the isolation of B. bronchiseptica.

ELISA testing can be used to confirm B. bronchiseptica antibodies in sera or saliva, but is used more for monitoring the status of a herd rather than diagnosis.

Differential diagnosis

Many pathogens cause pneumonia in pigs and B. bronchiseptica is typically found in mixed bacterial cultures.

The differential diagnosis of the pneumonic form of B. bronchiseptica infection should include swine influenza, PRC virus, Actinobacillus suis, Actinobacillus pleuropneumoniae, Pasteurella multocida, Mycoplasma hyopneumoniae, Salmonella choleraesuis, Streptococcus suis and Haemophilus parasuis.

For rhinitis in young pigs P. multocida and porcine cytomegalovirus should be considered.

Control

B. bronchiseptica is usually sensitive to chlortetracycline, oxytetracycline or enrofloxacin. Antibiotics may relieve clinical signs but it will not rid the animals of B. bronchiseptica from their upper respiratory tracts. Control using antibiotics centres around their use at key times of stress, such as farrowing or weaning, to minimise respiratory tract colonisation in the piglets. Antibiotic use in older pigs is of limited value and often does not stop B. bronchiseptica infection progressing into atrophic rhinitis.

Vaccination is based on the use of killed bacterins, which often include other bacterial pathogens, such as P. multocida or live, attenuated intranasal vaccines.

A good way to protect piglets is to maximise the protective maternal antibody that they pass down to their piglets by vaccinating them six and two weeks before farrowing. Vaccination of the piglets themselves has been met with mixed results.