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## Diagnosis of salmonellosis

Isolation of salmonella, coupled to an appropriate history and clinical signs, are the minimum requirement for a diagnosis of salmonellosis in calves. For most salmonella serotypes faecal microbiology is usually sufficient, but for Salmonella dublin blood trachea and lungs should also be sampled.

When the age of the affected calves ranges from neonates to several months, salmonella is a more likely cause for the problem because E. coli tends to only affect neonates.

Calves which die peracutely should be examined by post mortem examination and samples for microbiological culture taken from the ileum, caecum or colon. In addition, the mesenteric lymph nodes, gall bladder and heart blood should also be cultured. Calves that die showing respiratory signs should also have their lungs cultured for S. dublin.

Subacute or chronic cases may have fibrinonecrotic or diphtheritic membranes scattered throughout their intestines. Sometimes the only lesion seen is oedematous mesenteric lymph nodes containing petechial haemorrhages.

## Treatment

The treatment of calves with salmonellosis is centred on fluid therapy and treating with antibiotics, although the latter has to be considered against the backcloth of the public debate on antimicrobial resistance.

On balance, antibiotic treatment is warranted for calves with peracute or acute signs (indicative of an overwhelming infection). Antibiotics should be given for at least 5-7 days. Asymptomatic calves and those with chronic salmonellosis do not benefit from receiving antibiotics.

Treating all the calves at risk with an oral antibiotic, such as tetracycline, is contraindicated as such an approach is more likely to be ineffective and/or favour the emergence of antibiotic resistance.

Antibiotic usage is best done as part of a planned treatment response that emphasises rapid fluid and electrolyte replacement, good nursing care, a good environment with adequate air turnover and the maintenance of good and adequate nutrition.

Antibiotics alone will not resolve a salmonellosis problem!