

Testing for Neosporosis



Infection with the protozoan parasite *Neospora caninum* is much more common than disease, however infected cows are 3.5 times more likely to abort than uninfected cattle. It is estimated that 13% of all bovine abortions are likely to be due to neosporosis.

Dogs, and possibly foxes, are the definitive host and horizontal transmission occurs when cattle ingest oocysts excreted in the faeces of infected canids.

There is no evidence of cow to cow transmission, however the probability of vertical transmission from cow to calf is very high at 95%.

Exposure of naïve cows to infective oocysts during pregnancy may or may not result in abortion, but provides protective immunity. This is termed exogenous infection.

Not all infected cows abort, hence calves may be born infected, but clinically normal. If these are retained as herd replacements, infection increases clonally in the herd, within family groups.

This is termed endogenous infection.

Control programmes for herds suffering abortions due to *Neospora caninum* depend on identifying infected cattle

by serological testing, then selectively breeding from seronegative animals. Seropositive animals and their offspring are bred to beef. The problem with serology is that antibody levels fluctuate widely in chronically infected animals, with a big surge in titre in the second half of pregnancy. This can be an issue particularly when selecting maiden heifers as potential herd replacements. A congenitally infected heifer may by this age appear to be seronegative, only producing high levels of antibodies once she is pregnant with a calf which is in turn likely to be infected.

Antibody testing is therefore most useful

- ◆ At drying off
- ◆ In heifer calves < 4 months of age

In either case, the likely status of both dam and calf can be established.

Bulk tank milk antibody testing can be helpful to give a broad indication of herd status.

Serology is not helpful in farm dogs as infected animals may remain seronegative but still shed oocysts.

The risk of exogenous infection is reduced by careful disposal of placentae/foetuses and the control of farm dogs.

NWL Clin Path Club

Due to refurbishment work at the meeting venue, there will be no North West region meeting in October.

Campylobacter Culture



Campylobacter spp. showing 'flying seagull' morphology

We have recently been busy reviewing methods for culturing *Campylobacter spp* from faeces. Rachel Hughes and Leeann Davidson, who together run the bacteriology labs here at Leeds, have had parallel cultures running to compare methods.

As a result, we shall now be able to report campylobacter cultures at the same time as the rest of the faecal package.

We have found that it can be difficult to distinguish *C. jejuni* from *C. upsaliensis* grown by any technique. We are therefore reporting '*Campylobacter spp.*' *Campylobacters* are commensal organisms found in the gastrointestinal tract of many healthy dogs and cats. However, in young or immunocompromised animals (especially those living in poor hygienic conditions), in animals with concurrent GIT pathology, or in patients that have had prior antibacterial therapy, significant infection can develop. Hence, where there are clinical signs, therapy is still recommended. Erythromycin remains the drug of choice. Repeat culture post treatment to confirm eradication of infection is advised, especially in view of the zoonotic potential.