



OVERVIEW

Death due to *Dictyoctonus viviparus*



A more typical lungworm outbreak involved a group of March-born dairy calves that had been turned out in June. Respiratory signs were noticed in mid-August, and as a result they were treated with oral levamisole. They initially improved but were housed three weeks later and treated with antibiotics after failing to fully recover. Five calves died over the next two weeks and a recumbent, dyspnoeic heifer was euthanased for postmortem examination. The lungs were hyperinflated with small patches of peri-bronchial consolidation. Small numbers of *D viviparus* were observed in the trachea, with very large numbers present within the bronchi (Fig 1). It was concluded that the lungworm burden was due to reinfection during the three-week period between anthelmintic treatment and housing. Detailed history taking is important when investigating possible treatment failure in these types of cases.

Figure 1 – *Dictyocaulus viviparus* worms in the airways in a previous case of fatal lungworm infection

Alimentary tract disorders

A 19-day-old Holstein heifer was euthanased to investigate an ongoing issue with calf deaths. Three calves with ocular lesions had been reported and *Escherichia coli* K99 enteritis had recently been diagnosed. The carcass weighed only 25kg and there was perineal hair loss secondary to diarrhoea. Bilateral



Figure 3 – Mesocolon oedema in a pre-weaned dairy calf

Respiratory tract diseases

A 30-month-old Limousin heifer at grass became lethargic and dyspnoeic and was found dead a few days later. It was one of ten heifers that had been moved to a



hepatica in autumn and winter. During September and October 57 submissions comprising 361 individual samples were tested in the *F hepatica* serum antibody ELISA. Only seven positive results (1.9 per cent) spread over five submissions were found indicating low liver fluke challenge on the majority of farms that carried out screening.

Nervous system disorders

Pyrexia, trembling and deaths started in a group of cross ewes and lambs four days following a move to new grazing. One carcase was submitted for postmortem examination and several ticks were noted. Additional findings included pericardial and pleural effusions and splenomegaly. Bacterial cultures were unrewarding, and *Clostridial perfringens epsilon* toxin was not detected. Neuropathology described meningoencephalitis consistent with louping ill and characterized by neuronecrosis and neurophagia. Disease usually results after an incubation period of between 8 and 13 days.¹ This indicates that sheep became infected on the original pasture prior to the move.

BIRDS

Pigeons

A three-month-old racing pigeon was submitted to investigate ill health in a group of 50 young birds where five individuals had become lethargic with loose faeces. They had all had been treated with an injectable antibiotic plus an oral anti-coccidial, and this was the only bird to have died. The group had received a paramyxovirus vaccine and were reported to be in good condition. Postmortem examination confirmed that the bird had been eating prior to death but the cause of death was not clear. Histopathological examination of tissue from the bursa of Fabricius revealed an acute to subacute bursitis with lymphocyte depletion, follicular cysts, necrosis and intranuclear/intracytoplasmic inclusion bodies consistent with circovirus infection. There was additional acute focal pneumonia with mixed bacterial infection. Pigeon circovirus infection causes immunosuppression increasing susceptibility to a range of infections. The virus is shed in faeces and saliva and birds up to four months-of-age are most susceptible. Control relies on good hygiene and biosecurity plus treatment of secondary infections.

References:

- 1 Jeffries CL, Mansfield KL, Phipps LP, *et al.* Louping ill virus: an endemic tick-borne disease of Great Britain. *J Gen Virol* 2014;95(5):1005-1014