



**Canolfan
Milfeddygaeth Cymru**
Wales Veterinary
Science Centre

NEWSLETTER CYLCHLYTHYR

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@WVSCAber



A **Christmas Jumper Day** for WVSC staff was held on the 5th December to raise money for The Farming Community Network (FCN). If anyone would like to contribute, then further donations will be gratefully received by the WVSC and added to the total.

BVD blood testing

If you are blood sampling over the Christmas period, then please consider refrigerating the samples, rather than risk haemolysis of the samples in the post over the holiday period.

Nadolig Llawn a Blwyddyn Newydd Dda, from all at the WVSC. Here is a summary of a selection of cases seen at the WVSC, since our last newsletter.

Bovine Neonatal Pancytopenia (BNP) was diagnosed in a two-week-old Friesian calf from a 500-cow dairy herd. The PVS suspected BNP when examining the calf, which had haemorrhages on the skin of the face and the body. Following euthanasia, post mortem examination revealed subserosal echymotic haemorrhages in the viscera, on the thymus and under the epicardium (Figure 1). Histology of bone marrow of the sternum revealed a severe, diffuse, pancytopenia consistent with BNP. BNP is associated with ingestion of colostrum from cows previously vaccinated with BVD vaccine (Pregsure) leading to immune-mediated bone marrow suppression with subsequent severe thrombocytopenia, and myeloid and erythroid precursor depletion. Further enquiries revealed that the dam of this calf had received the PregSureR vaccine.

Figure 1. Subserosal haemorrhage on abomasum



In some instances, it can be difficult to distinguish between **late term abortion and foetal death**, at or near parturition. The following are examples of death at the time of parturition where lesions and history pointed to foetal oversize, dystocia or iodine deficiency.

A **stillborn calf** was submitted from a beef suckler herd. The dam was a heifer that was said to have had a difficult parturition with the calf getting stuck at the shoulders. The calf weighed 45 kg. There was minimal meconium staining and subcutaneous echymotic haemorrhages in the neck and lateral to the tongue, which was swollen. The coat was dry. Histology of the brain revealed haemorrhage of the brainstem which is a common finding in stillborn calves. No other lesions were seen and foetal oversize and failure to proceed with parturition was the likely cause of death.

Another stillborn calf was received from a spring-calving suckler herd where three calves had been born dead in one week. Eight cows were not in reproductive synchrony with the rest of the herd and all three calves had to be pulled. At post mortem, the calf, which weighed 61 kg, had widespread echymotic haemorrhages in the muscle of the cheeks, along the trachea and inside the rib cage. There was significant meconium staining over the hide of the carcass, a good indicator of foetal distress at parturition.

In a further case of stillbirth, **iodine deficiency** was suspected. Six stillbirths had occurred in this 60-cow beef suckler herd. This was the second carcass submitted for post mortem. Histology of the thyroid revealed moderate follicular hyperplasia which raised the possibility of *in utero* iodine deficiency or exposure to goitrogens. Blood sampling of a cohort of dams on the same diet was advised, to evaluate plasma inorganic iodine levels and prevent further cases.

Two abortions due to salmonellosis were recorded during this period. One was caused by *Salmonella* Dublin, in a beef suckler herd where there had been five previous abortions. The second was caused by *S. Agama* on a dairy farm where two second-calvers aborted, an in-vitro antibiotic resistance pattern showed resistance to tylosin in this bacterium. A possible role for wildlife has been implicated in outbreaks of this salmonella serotype.



Figure 2. Vegetative endocarditis on left AV valve

A four-year-old cow died of **bacterial endocarditis** after a short period of decreased appetite, condition loss, recumbency and milk drop. Several other dairy cows had died in the previous months. At post mortem, this animal had irregular creamy coloured firm vegetations on the left atrioventricular valve (Figure 2). The cow also had a verminous bronchopneumonia, with adult lungworms in the trachea and bronchi. Histology of lung tissue revealed pulmonary thromboembolism, most likely associated with the endocarditis and associated bacteraemia. Histology of kidneys revealed chronic interstitial nephritis, which is often associated with a haematogenous pathogenesis. The cow also had a

large callus mid-way down the right fourth rib suggesting previous rib injury that had healed.

Parasitic gastroenteritis (PGE) has continued to feature since the last newsletter, eight cases have been diagnosed at the WVSC. Practitioners should alert their farming clients to the ongoing risk of PGE, often causing debilitation that leads to systemic pasteurellosis, even in vaccinated growing lambs. Another sequel can be cobalt deficiency, and pale or white livers encountered at post mortem.

Lungworm was diagnosed in a two-year-old ewe. At post mortem, there was a nasal discharge and froth in the trachea and bronchi. There was interlobular oedema and congestion in all lung lobes, and multiple distinct grey circular lesions mostly in the right lobe. Although the flock had a history of OPA, histology revealed a multifocal nodular granulomatous pneumonia with a pattern typical of degenerate parasitic material and ghosted structures suspicious of nematodes. There was no evidence of OPA in sections examined.

Gastric ulceration was diagnosed in a female adult meerkat, from a local zoological collection. It had not eaten for three days and was dehydrated. It was seen by a PVS and given antibiotic, an anti-inflammatory and fluids. The animal continued to deteriorate and died. It had two well circumscribed ulcers with blood clots in the centre (Fig 3). It was not possible to determine the cause of the ulceration, there was no relevant information when consulting the *compare the meerkat.com* website.

Figure 3. Gastric ulceration in a meerkat



Fluke watch. The WVSC has issued no fluke warnings this autumn and winter. The very dry summer predictably curtailed the fluke life cycle, with the intermediate mud-snail host not being available for the fluke miracidia to parasitise, and complete the life cycle. No evidence of fluke infection has been seen in any of the 34 sheep and lamb carcasses examined over the last three months. However, fluke eggs have been seen recently in 10 of 44 sheep faeces samples examined at the WVSC, indicating that fluke infection has been acquired later than usual, and treatment is advised if not already done. Further advice, and details of how to treat, can be found on the SCOPS website.