



## Happy 5<sup>th</sup> Birthday to the WVSC

The WVSC received the first submission for postmortem examination (PME) in April 2015. Since then, more than 1650 submissions have been received at Y Buarth for a government subsidised PME. From those early days, we have extended our services to include PMEs of some other animals, parasitology and BVD testing (over 70,000 animals have been tested for BVD antibodies). A massive thank you to all the staff (past and present) and to all our customers and supporters.

**Copper deficiency (hypocupraemia)** was the cause of recumbency, weakness and ataxia in two neonatal lambs submitted for a postmortem examination (PME).



Photo 1. 'Small' brain with excessive CSF

Gross findings included excessive cerebrospinal fluid (CSF) within the skull and a brain that appeared to be too small for the skull (Photo 1). Leukenencephalopathy (oedema) was diagnosed with histology by Toby Floyd at APHA Weybridge. The changes were most suggestive of a toxic or metabolic insult. Copper analysis of frozen liver gave a result of 114.00µmol/kg DM (ref range 314-7850µmol/kg DM) confirming copper deficiency. Copper supplementation was advised.

**Bovine Viral Diarrhoea** was the most likely cause of weakness and stunted growth in two calves submitted for PME recently. On examination of the brain grossly, both calves had fluid-filled cavities within both cerebral hemispheres (porencephaly). This was reported to APHA Field Services as a suspect Blue Tongue Virus (BTV) infection but negated after testing at Pirbright. Histology confirmed the porencephaly and changes

most suggestive of an in utero viral infection. Other than BTV, differential diagnoses include Schmallenberg Virus (SBV) or Bovine Viral Diarrhoea Virus (BVDv). PCR testing of frozen brain was negative for SBV. BVD virus testing was also negative but this would be expected due to historic infection during pregnancy. BVD antibody testing was positive but doesn't prove BVD was the cause as this could have been due to maternal antibodies. Nonetheless, BVD remains the most likely cause, supported by the fact that this herd previously tested negative with BVD serology testing but a recent GwareduBVD test returned positive antibodies. A bull recently purchased, is believed to be the source.



Figure 2. Porencephaly of the brain

**Bovicola bovis** biting lice were found on a yearling steer submitted for condition loss, weakness and recumbency. There was

subcutaneous oedema under the jaw and between skeletal muscle planes. The rumen had poor fill and there were profuse numbers of rumen fluke. A worm egg count revealed 2,150 trichostrongyle-type eggs per gram of faeces. Over 300 epg is considered a heavy burden in cattle and enough to cause parasitic gastroenteritis. Advice was given for immediate action to treat others in the group, under veterinary supervision, for rumen fluke lice and worms, to improve the welfare of others.

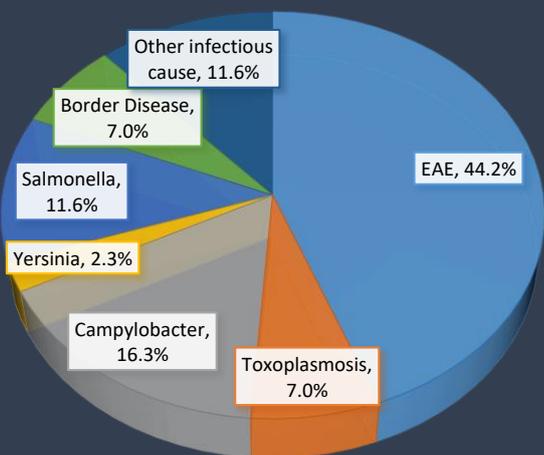
multifactorial nature of calf pneumonia. Both *M. haemolytica* and *M. bovis* are important bovine respiratory pathogens. This case was further complicated with Salmonellosis. A review of management was advised along with vaccination against Salmonella and Mannheimia.

**Clostridial disease in sheep** is often seen in unvaccinated lambs at this time of year. *Clostridium perfringens* type B (Lamb dysentery) has been detected in four submissions recently. The first submission eight lambs had been found dead in the field and in the second a comatose lamb was found in the field and another was found dead. Gross pathology signs include a jelly-like clot in the pericardium and reddened loops of small intestine. Alpha, Beta and Epsilon toxins were detected by ELISA testing on terminal ileum content. *Clostridium perfringens* type D (Pulpy kidney) was confirmed on a farm where one six-week-old lamb was found dead on the fields. Gross pathology found a jelly-like clot in the pericardium. Toxin testing was negative on terminal ileum content but the disease was confirmed by histology examination of fixed brain.

**TICK BORNE FEVER (TBF) ALERT – Recent PME submissions suggest TBF is already quite a problem this year. Please remind your clients to avoid using tick infested pasture at this time of year if possible, apply acaricides regularly or carry out pasture management.**

### WVSC OVINE ABORTION DIAGNOSES (Winter 2019-Spring 2020)

The last two years have seen a drop in ovine abortion submissions which we assume is down to more vets carrying out the testing themselves. The average for the 5 years we have been open is 76/year. This lambing season we received 59 cases. However, we are delighted that we achieved an **overall diagnosis rate for ovine abortions of 73%** compared to the five-year average of 62%. The usual suspects were diagnosed although the diagnoses of Toxoplasmosis fell by half the average incidence to 7% and Salmonella and Border disease were higher than usual (12% & 7% respectively).



**Salmonella Dublin, Mannheimia haemolytica** and **Mycoplasma bovis** were detected in a seven-week-old calf submitted for PME. This calf had been seen stretched out in the morning and was breathing heavily. It died soon afterwards. Gross PME found cranioventral consolidation of the cranioventral lung lobes with multiple 1mm diameter micro abscesses. Approximately 30% of caudal lobes were also affected. Bacterial culture of lung cultured *Salmonella* Dublin and *Mannheimia haemolytica*. *Mycoplasma bovis* was also later detected by DGGE. This demonstrates the

### Virtual CPD

Our Basic Sheep modular course is back and will be held on Wednesday 22<sup>nd</sup> July. Click here to book your place.

WVSC VIOs: Beverley Hopkins & Jon. King  
Roger Daniel, Kate Hovers and Ian Davies

Wales Veterinary  
Science Centre  
Y Buarth, Aberystwyth,  
Ceredigion, SY23 1ND

Please check the eligibility for **free carcass collection** via this website:



01970 612374

ahvla.defra.gov.uk/postcode/pme.asp



enquiries@wvsc.wales



http://www.wvsc.wales

The suitability of submissions for a postmortem exam. must always be discussed with the WVSC duty vet.



walesvetscience



@WVSCAber