

OVERVIEW

Helcococcus ovis as a cause of valvular endocarditis in a Charolais bull.

Individual losses due to neoplasia in both cattle and sheep.

Sheep deaths related to toxicities associated with grazing alternative forages.

Fatal infection with intestinal fluke (*Brachylaemus erinacei*) in a hedgehog.

GENERAL INTRODUCTION

Across the UK December could be summed up as warm, wet, dull and windy. The exception to this was Northern Scotland where mean temperatures were as expected and above average sunshine was recorded in the northwest. The rest of Scotland experienced mean temperatures 0 -year (1991 2020) average. Rainfall and sunshine figures for Scotland as a whole were 141 per cent and 91 per cent of average.

DISEASE ALERTS

The following conditions were reported by SRUC VS disease surveillance centres in March 2023. Given similar climatic and production conditions, they could also be important this year.

Tyre wire (hardware) disease

Ingested metal objects such as pieces of wire can become trapped in the reticulum with subsequent penetration of the wall leading to traumatic reticuloperitonitis. A review of 503 cases¹ found that the diagnosis was most common in adult cattle during the period between December and April. 87 per cent of affected cattle had an abnormal demeanour with reduced or absent rumen motility in 72 per cent. 43 per cent were pyrexic with spontaneous signs of pain in 36 per cent. These included arching of the back, bruxism or grunting. Only 58 per cent gave a positive response to a foreign body test e.g. withers pinch. Fibrinogen and total protein were the most useful ancillary tests with elevated levels in 69 and 64 per cent of cases respectively.

Campylobacter abortion in ewes

Across the UK as a whole *Campylobacter* spp were the most commonly diagnosed cause of ovine abortion in spring 2023. This was not the case in Scotland where it was third behind toxoplasmosis and EAE. Ring lesions on the liver surface are seen infrequently and positive cultures from foetal stomach contents are required to confirm the diagnosis. In 2023 91 per cent of isolates were shown to be *C. fetus* and 5.6 per cent *C. jejuni*. Detection of potential zoonotic organisms is one reason for investigating abortions. Foetal stomach contents, foetal fluids and placenta are the most important samples to collect.

CATTLE

Nutritional and metabolic disorders

Blood samples were collected from four animals following the sudden death of two beef cows. The herd had been housed since mid-October and were fed pit silage top dressed with meal. Magnesium results ranged from 0.4 to 0.77 mmol/l (reference range 0.8 to 2 mmol/l) confirming deficiency. Inconsistent diet presentation and inadequate feed space were identified as risk factors that may have limited magnesium intake.

Generalised and systemic conditions

A two-vear-old Limousin heifer nearing slaughter weight was found dead unexpectedly. It had been housed for two months with 30 other animals on a total mixed ration of straw, maize and barley. Two, 10 to 22 cm diameter abscesses were found within the liver one of which was situated adjacent to the vena cava. There was no visible evidence of thrombus formation but haemorrhage had occurred within the vessel wall. Trueperella pyogenes was isolated from the pus and histopathology confirmed septicaemia with numerous intravascular Gram-positive bacterial colonies consistent with T pyogenes. thrombosis and suppurative infection in the lungs. The rumen pH was 5.3 and in a very fresh carcase this was not considered significant in relation to the death of this heifer. However, it is likely that subclinical rumen acidosis had been a predisposing factor in development of the liver abscesses.

A sixteen-month-old Aberdeen Angus heifer was submitted following euthanasia to investigate swelling of the neck, brisket oedema and bloating. Postmortem examination found marked enlargement of the cervical and thoracic thymus glands which were firm, white and homogenous on section. Lymph nodes throughout the carcase were up to three times their normal size and a 25 cm mass was found adjacent to one kidney. An additional single circular mass 5 cm in diameter was identified within the ventral rumen wall. Histopathology confirmed thymic lymphoma with metastasis to lymph nodes, kidney and rumen wall. Thymic lymphoma in cattle characteristically occurs in beef yearlings and bloating +/- dysphagia associated with oesophageal compression is a common presentation (Fig 1). Metastasis to non-lymphoid tissues as described in this case is infrequently reported. APHA was informed because lymphoid neoplasia was present but Enzootic Bovine Leukosis (EBL) was not suspected and no further action was taken.





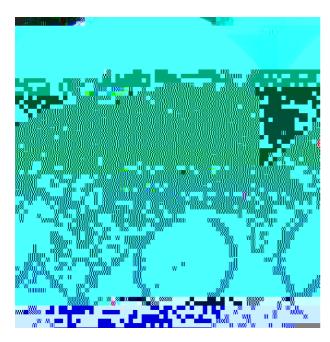


Figure 6 – Large numbers of eggs within the fluke *Brachylaemos erinacei* recovered from the intestine of a hedgehog

References:

- **1** Braun U, Warislohner S, Torgerson P, Nuss K, Gerspach C. Clinical and laboratory findings in 503 cattle with traumatic reticuloperitonitis. *BMC Vet Res 2018:14:66* https://doi.org/10.1186/s12917-018-1394-3
- **2** Kutzer P, Schulze C, Engelhardt A. *et al. Helcoccus ovis*, an emerging pathogen in bovine valvular endocarditis. *J Clin Micro* 2008; 46(10): 3291-5