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Northern Ireland Disease Surveillance Report, April to July 2024

- Ragwort poisoning in cattle
- Dwarfism in cattle
- Plant poisoning in sheep
- Haemonchosis in sheep
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These are some of the matters discussed in the Northern Ireland animal disease surveillance quarterly report for April to July 2024

CATTLE:

Respiratory disease

Pneumonia due to *Histophilus somni*

Pneumonia due to *H. somni* infection was diagnosed by full postmortem examination of a seven-day-old calf. Grossly there was cranioventral pulmonary consolidation and on incision the parenchyma had a pale mottled appearance with micro-abscesses evident. Histologically there was generalized congestion and alveolar odema with fibrin exudation into the airspaces. Suppurative bronchitis and bronchiolitis were present and there was expansion of the pleura by neutrophils. *H. somni* was recovered in moderate growth from lung tissue.

Nutritional and metabolic disease

Poisoning due to pyrrolizidine alkaloids was diagnosed in a group of eighteen-month-old bullocks which all showed characteristic liver pathology including megalocytosis on histology. Ingestion of ragwort is the cause of pyrrolizidine alkaloid toxicity.

Reproductive and mammary diseases

Dwarfism

Dwarfism was diagnosed in a three-day-old calf. At necropsy, bilateral opacity to both lens and disproportionately shortened bones were noted (FIGURE 1), with bilateral shortening of the humerus causing a 1.7:1 length: width ratio. The Radius, metacarpus and femur measured 9 cm, 7 cm, and 9 cm, respectively. There was also hydrocephalus present.



FIGURE 1: Shortened long bone in a dwarf calf. This calf also had hydrocephalus

Udder cleft dermatitis (UCD)

Udder cleft dermatitis (UCD), septic phlebitis of the right milk vein (FIGURE 2), and embolic septic pneumonia were diagnosed in a three-year-old dairy cow. Similar cases have been diagnosed previously in this herd. At necropsy there was a 6cm long skin wound on the right forequarter and a 3 cm skin wound on the left forequarter. There was locally extensive induration of mammary tissue associated with the surface wounds. There was suppurative vasculitis in large drainage veins of the right forequarter containing dark brown purulent watery fluid. There was thickening of skin along the right abdominal floor, oedema, and fibrosis along the course of the right mammary vein, and the vein contained watery brown purulent fluid. There were miliary foci of consolidation, pneumonia, oedema, and suppuration throughout all lung lobes (1-3 cm diameter) and there were suppurative foci based on branches of the pulmonary arteries (embolic pneumonia).



FIGURE 2: UCD and septic phlebitis in a dairy cow, there was associated embolic pneumonia

Other diseases of cattle

A sixteen-month-old, black, and white dairy type heifer was found dead in the cubicles. There was an exceptionally large haematoma on the back. There was oedema and subcutaneous haemorrhage along both sides. The carcass was pale, and blood appeared thin. There was moderately advanced *post mortem* autolysis. The carcass of this heifer was 'bled out'. Death is an uncommon sequela of a subcutaneous haematoma.

Blackleg in bulls

Clostridium chauvoei myositis (Blackleg) was diagnosed in three sixteen-month-old bulls which had not been vaccinated against clostridial disease. Classic lesions were detected in the skeletal musculature in all cases and in the heart in one case. Fibrinous pleurisy and pericarditis were also present. *Cl. chauvoei* antigen was demonstrated in the lesions by immunofluorescence. It was noted that vaccination of growing beef animals against clostridial diseases is always cost effective.

SMALL RUMINANTS: SHEEP

Respiratory diseases

Pulmonary abscessation

Severe pulmonary abscessation and pneumonia was present in a four- week- old lamb. *Trueperella pyogenes* was cultured from lesions. There were also severe orf lesions at the muzzle and lower lip though the presence of clotted milk in the abomasum indicated the lamb was still able to suck.

Alimentary disease

Abomasitis due to *Mannheimia haemolytica* infection

Two -three- week old lambs, from different flocks, which were found dead were submitted for postmortem examination. The serosal surface of the abomasum was fiery red and overlain by thick strands of fibrin. The abomasal wall was thickened and haemorrhagic (FIGURE 3). *Mannheimia haemolytica* was isolated in septicaemic distribution including from the abomasum.



FIGURE 3: Abomasitis in a lamb with septicaemic pasteurellosis

Nematodiosis

A two-month-old 30kg female lamb was submitted for postmortem examination. This was the fourth lamb in the batch to die. The batch had been wormed and given a vitamin drench two weeks earlier. On postmortem examination there were suffusive epicardial and endocardial haemorrhages, and moderate pericardial effusion containing a gelatinous fibrin clot. Bacteriology was unremarkable, tests for clostridial toxins were negative, and a heavy burden of *Nematodirus* was detected in small intestine (19800 worms). Nematodiosis was a frequent diagnosis during the quarter, intercurrent coccidiosis was common. In some flocks affected lambs died due to pneumonic pasteurellosis precipitated by the stress of parasitism.

Haemonchosis

Postmortem examination was performed on a three – month - old lamb. There was anaemia, ascites and hydrothorax, and gastrointestinal blood loss. Almost 15,000 *Haemonchus contortus* worms were detected in the abomasum. Haemonchosis is becoming a more common diagnosis in Northern Ireland and the AFBI parasite forecast issued in Spring 2024 carried a warning to this effect.

Nutritional and metabolic disease

Poisoning due to ingestion of yew

Poisoning due to the toxic alkaloid taxane was diagnosed in a one -month-old-lamb which had ingested yew (*Taxus baccata*) whilst at grass.

Poisoning due to ingestion of azalea

Poisoning due to the neurotoxin grayanotoxin was diagnosed in a ewe submitted with a history of foaming at the mouth and head shaking. On gross examination numerous azalea leaves were found amongst the rumen contents. Azalea (*Rhododendron prunifolium*) is a member of the *Ericaceae* family of heath shrubs.

Copper poisoning

An 82 kg black and white ram was examined. There was a yellow brown colouration of the carcass connective tissue, viscera, and conjunctivae. There was haemoglobinuria. Tissue copper levels were within limits consistent with copper toxicosis, and histopathology was suggestive of copper toxicity and significant chronic fascioliasis. *Salmonella* species was cultured (on secondary enrichment only, i.e., at a low level) from the intestine and liver. It was noted that the concurrent conditions of hepatic fascioliasis and salmonellosis may have increased the likelihood of this sheep succumbing to copper toxicosis.

Reproductive diseases

Dystocia due to foetal anasarca was diagnosed in a two-year-old ewe with one of the lambs in utero weighing almost 16 kg (FIGURE 4 over page) and paired with a small, mummified foetus. There was very severe subcutaneous oedema of the large lamb with hydrothorax and ascites also present. Foetal anasarca (also known as congenital dropsy or hydrops foetalis) is a rare cause of dystocia in sheep. There are literature reports in both cattle and sheep attributing the condition to an autosomal recessive allele, i.e., it may have a genetic predisposition in some flocks.



FIGURE 4: Foetal anasarca with a large dropsical lamb paired with a mummified foetus

Locomotory disease

Septic arthritis ('joint ill') was diagnosed two, one- week- old lambs. The history provided indicated that the lambs were unable to rise and had stopped sucking. At necropsy, in both lambs there was septic arthritis affecting multiple joints including the atlanto-occipital joint. There was also suppurative omphalitis ('navel ill'), nephritis and valvular endocarditis in one of the lambs. *Streptococcus pluranimalium* was isolated from multiple tissues including joints of both lambs.