

REGIONAL VETERINARY LABORATORIES REPORT

April 2026

Regional Veterinary Laboratories (RVLs) carried out necropsy examinations on 778 carcasses and 115 fetuses during April 2026. Additionally, 1,470 diagnostic samples were tested to assist private veterinary practitioners with the diagnosis and control of disease in food producing animals. This report describes a selection of cases investigated by the Department of Agriculture, Food and the Marine's (DAFM) veterinary laboratories in April 2026.

The objective of this report is to provide feedback to veterinary practitioners on the pattern of disease syndromes at this time of the year by describing common and highlighting unusual cases. Moreover, we aim to assist with future diagnoses, encourage thorough investigations of clinical cases, highlight available laboratory diagnostic tools and provide a better context for practitioners when interpreting laboratory reports.

Cattle

Enteritis and pneumonia were the most common diagnoses at necropsy in cattle in the RVLs during April 2026.

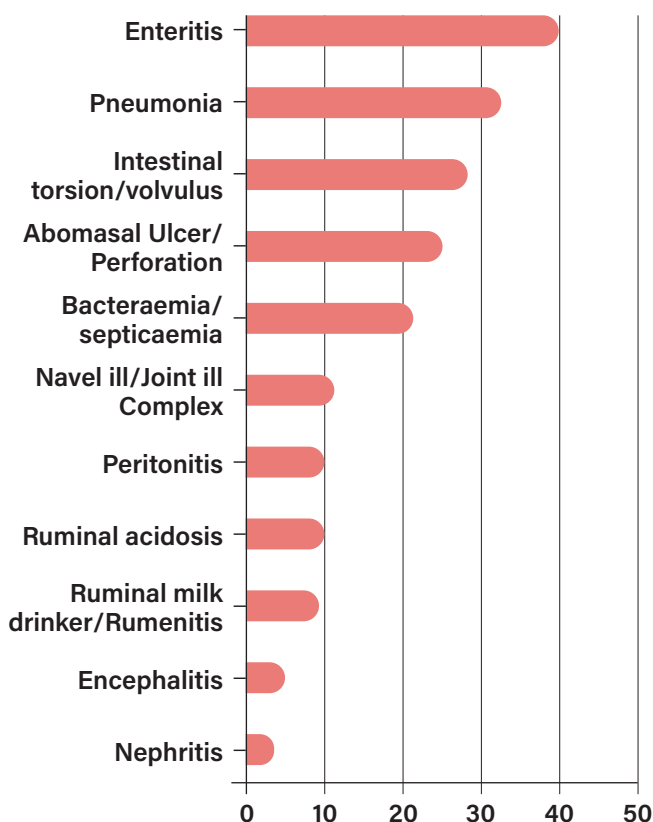


Table 1: The most common diagnoses in cattle submitted for necropsy in April 2026.

Gastrointestinal Tract

Perforated abomasal ulcer

Sligo RVL examined the carcass of a one-month-old calf which had been observed with clinical signs of colic before death. On post-mortem examination, there was severe dehydration noticed. There was severe abomasitis with abomasal fold oedema and a large, ruptured ulcer approximately 3cm in size. There was concurrent, severe, fibrinopurulent peritonitis. No causative agent was detected. Abomasal ulceration can be triggered by several causes including dietary changes, stress, or concurrent infections.

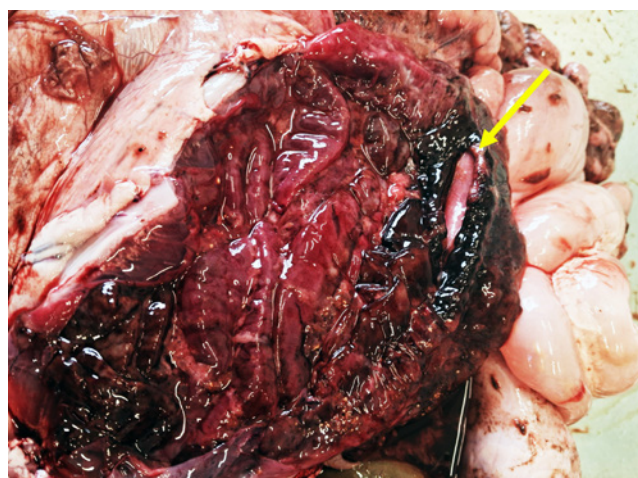


Figure 1: Abomasal ulcer (arrow) and abomasal fold oedema in a calf. Photo: Rebecca Froehlich-Kelly.

Peritonitis

The carcass of a two-month-old calf, which had been observed passing blood in faeces, was submitted to Sligo RVL. On post-mortem examination, there was severe peritonitis. Intestinal walls were thickened. There was mild abomasitis. A moderate infection with coccidia was detected in this animal. Coccidiosis is a frequent cause of haemorrhagic enteritis in calves of this age and can be associated with increased infection pressure due to contaminated bedding if housed, or congregation around feed troughs while at pasture.

Reticuloruminal milk accumulation ('ruminal drinking')

A 26-day-old calf with diarrhoea, which didn't respond to treatment with antibiotics, was submitted to Kilkenny RVL. The calf was severely dehydrated. There was milk in the rumen contents; the calf was a "rumen drinker" in which the oesophageal groove failed to close. The intestinal contents were pasty. There was a small abscess at the umbilical vessels, and a review of navel hygiene at calving was advised. There are a number of conditions that can make calves more susceptible to rumen drinking including: neonatal diarrhoea; milk or milk replacer fed at too cold temperature or incorrectly mixed replacer; drinking from an open bucket; tube feeding of milk; etc. In this case, the calf tested positive for *Cryptosporidium parvum*, a common cause of enteritis.



Figure 2: Milk in the rumen of a calf where the oesophageal groove failed to close. Photo: Aideen Kennedy.

Respiratory Tract

Fibrinous pericarditis and pleuropneumonia

A seven-week-old calf with respiratory signs was submitted to Kilkenny RVL. There was a severe fibrinous pericarditis, a fibrinous pleuritis, and pneumonia. There were multifocal purulent lesions in the lungs. *Pseudomonas aeruginosa* was cultured, this organism causes a wide range of opportunistic infections. It may occasionally cause acute systemic disease. In bovine animals, clinical conditions arising from infection with this organism include: mastitis, metritis, pneumonia, dermatitis, and enteritis. *Mannheimia haemolytica* was also identified and it is commonly identified in cases with similar gross findings to this case.



Figure 3: Severe fibrinous pericarditis from which *Pseudomonas aeruginosa* was cultured. Photo: Aideen Kennedy.

Neonatal respiratory failure due to bronchopneumonia

Limerick RVL examined a one-day-old pedigree Charolais calf that had an uneventful birth, but became lethargic and developed respiratory signs, and showed no response to treatment. Necropsy revealed lungs that were heavy with severe and diffuse congestion, multifocal, red mottled areas, oedema, and emphysema. There were multifocal emphysematous bullae in the caudal lobes. Some pieces of lung did not float in formaldehyde; there were no visible lesions in the heart. Histopathology of the lungs revealed

a diffuse, suppurative, and fibrinous bronchopneumonia with multifocal areas of atelectasis, emphysema, and haemorrhage. A mixed bacterial growth was detected on culture of the lungs. A diagnosis of bronchopneumonia causing severe neonatal respiratory failure was made. Pneumonia may have resulted in utero during gestation or from inhaled, contaminated, amniotic fluids during parturition, or from immediate postpartum septicaemia.



Figure 4: Lungs from a case of neonatal respiratory failure. Photo: Brian Toland.

Urinary/Reproductive Tract

Nephritis

A three-week-old calf was submitted to Kilkenny RVL with a history of diarrhoea that the calf had partially recovered from, before deteriorating again. The calf was severely dehydrated. There was navel ill and severe, bilateral, multifocal, chronic, interstitial nephritis resulting in variably sized pale areas ("white-spotted kidney") visible grossly on the kidney cortex, a common sign of chronic inflammation following bacteraemia in calves. The intestinal contents were pasty and yellow-coloured. *Escherichia coli* was cultured from multiple organs suggesting a potential cause of the bacteraemia. Rotavirus was also identified.



Figure 5: White-spotted kidneys with pale cortices, a sign of chronic inflammation following bacteraemia. Photo: Aideen Kennedy.

A six-week-old Aberdeen Angus cross suckler calf was submitted to Limerick RVL with a history of stiffness and of no response to treatment. Main finding at post-mortem

included kidneys with a pale brown/grey colour and irregular nodular appearance across the cortical surface. Histopathology revealed a chronic/active, suppurative, tubulointerstitial nephritis with interstitial fibrosis. Renal lesions are likely due to bacterial infection; a prior episode of bacteraemia was suspected. Culture results were negative; however, the calf had been treated previously with antibiotics.



Figure 6: Bovine kidney with an irregular multifocal nodular appearance in a case of nephritis. Photo: Brian Toland.

Omphalitis

A four-week-old suckler calf with a history of sudden death was submitted to Limerick RVL. The navel was markedly swollen and infection had spread to the liver. There were multifocal abscesses on the surface and in the body of the liver; there were also multifocal white spots present on the surface of the kidneys. *Streptococcus uberis* was cultured from the umbilicus, liver, and kidneys. A diagnosis of omphalitis leading to bacteraemia and septicæmia was made.



Figure 7: Cross-section of a swollen umbilicus with a purulent centre surrounded by connective tissue. Photo: Brian Toland.

Cardiovascular System

Vena cava thrombosis

Sligo RVL examined the carcass of a two-year-old cow. The animal was initially noticed due to a health collar alert, then observed with reluctance to rise, mouth-breathing, and running into obstacles; treatment attempts were not successful. On post-mortem examination, there was a large septic thrombus in the vena cava at the hepatic hilus.

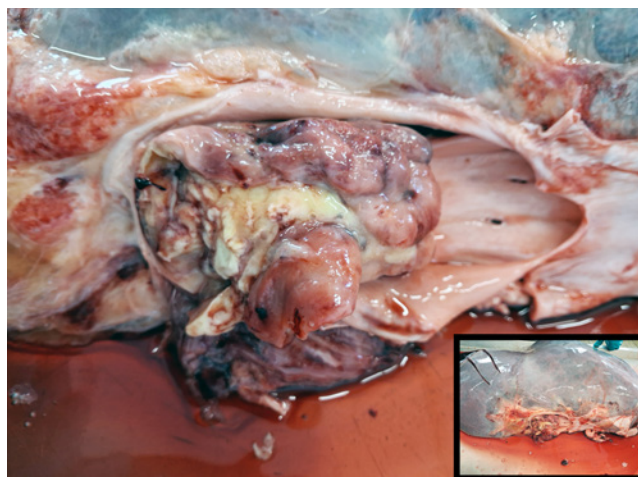


Figure 8: Septic thrombus in the vena cava of a cow and (inset) its location relative to the liver. Photo: Rebecca Froehlich-Kelly.

The liver presented with a mild 'nutmeg' pattern of congestion. There were extensive petechial and ecchymotic haemorrhages in the mesentery. The lung presented with 'ground glass' emphysema and oedema. No causative pathogen was detected. Septic thrombosis with bacteraemia/septicæmia was diagnosed as the cause of death.



Figure 9: Petechiation in mesentery in a cow with septic thrombosis. Photo: Rebecca Froehlich-Kelly.

Tricuspid valve dysplasia

Athlone RVL examined a 36-hour-old perinatal calf with a history of unassisted birth; the calf was stomach tubed as unable to stand, was treated by vet with no response, and died. The heart was enlarged and rounded, and there were multifocal, nodular, fibrosed lesions on the tricuspid valve between the right atrium and ventricle. There was diffuse pulmonary congestion. A conclusion of congenital tricuspid valve dysplasia leading to heart failure was reached. Tricuspid valve dysplasia (TVD) in calves is a rarely reported congenital heart defect where the valve between the right atrium and right ventricle is malformed. A differential diagnosis for this condition would be vegetative endocarditis; however, it was considered unlikely in this case due to relatively uniform gross appearance of the lesions, the age of the animal, and the absence of evidence of a preceding bacterial infection.

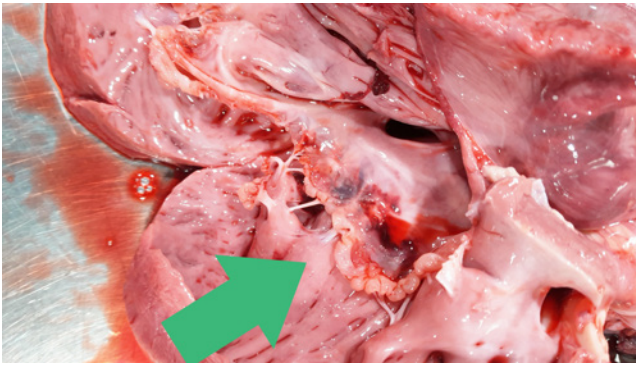


Figure 10: Nodular lesions of tricuspid valve dysplasia (arrow). Photo: Denise Murphy.

Nervous System

Congenital defects

Congenital defects arise from a mix of genetic factors (inherited or random mutations), non-genetic (environmental) factors, or a combination of both. While many defects are sporadic with unknown causes, any deformed carcass submitted to the RVLs is tested to rule out a potential role of teratogenic viruses, e.g., pestiviruses (including bovine viral diarrhoea virus, or BVDV), Schmallenberg virus (SBV), and bluetongue virus (BTV). In these cases, submission of any further losses is always recommended to detect any potential patterns. An example submitted to Kilkenny RVL this spring, yielded negative results for SBV, BVDV, and BTV, and included a one-week-old calf that couldn't stand and lacked coordination. There was an approximately 1cm-in-diameter midline opening through the skull in the frontal bone region with partial protrusion of fluid-filled meningeal lining (meningocele). The underlying caudal cerebrum and cerebellum were flattened and deformed, likely as a result of altered cerebrospinal fluid flow and increased pressure on the developing brain. Meningocele is a relatively common congenital lesion in cattle resulting from incomplete fusion of skull bones and protrusion of meninges or, in more extreme cases, brain (meningoencephalocele), as a result of a neural tube defect during embryological development.

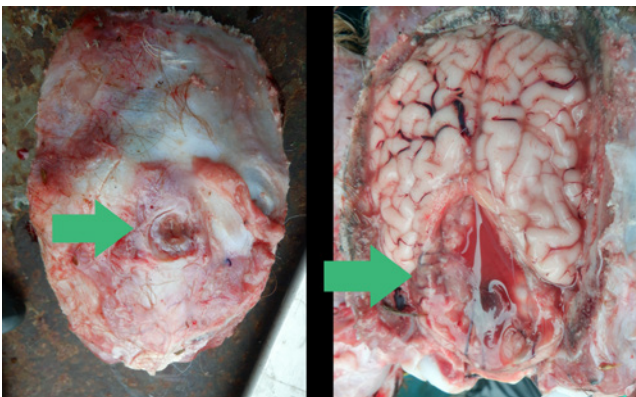


Figure 11: An opening through the skull (left) of a week-old calf with a meningocele and (right) an underlying brain deformity. Photo: Aideen Kennedy.

Meningitis

A three-week-old calf with suspected meningitis was

submitted to Kilkenny RVL, there had also been others sick in the group. The calf was dehydrated. The meninges appeared cloudy, and the kidneys and lungs were congested. *E. coli* was cultured from multiple organs suggesting a bacteraemia/septicaemia. On histopathology, there was a suppurative meningitis. The calf was too old to check for failure of passive transfer but given the group issue it was advised to check cohorts under two weeks old to ensure adequate colostrum management.

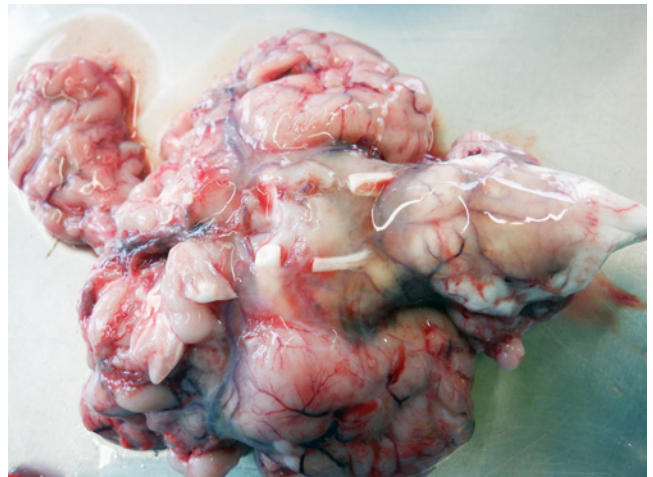


Figure 12: Cloudy meninges covering the brain stem of a calf from which *Escherichia coli* was cultured. Photo: Aideen Kennedy.

Musculoskeletal

Blackleg

Three yearling bulls were submitted to Dublin RVL for post-mortem examination from the same feedlot shed, with a history of sudden death. The three bulls had never been on pasture. There were similar lesions found in all three bulls where skeletal muscle contained dry, dark, emphysematous lesions. In the first bull, these lesions were found in muscle over the right shoulder; in the second bull, lesions were found within musculature of the inside of the left leg; and, in the third bull, the lesions were found in the left rump and right shoulder. Clostridial myositis (blackleg) was suspected based on gross findings and confirmed using fluorescent antibody technique (FAT) which identified *Clostridium chauvoei* in the lesions.



Figure 13: Piece of skeletal muscle taken from the right shoulder of a yearling bull containing lesions consistent with blackleg. Photo: Colm Brady.

The literature indicates that blackleg most commonly presents in cattle between nine months and two years of age. Blackleg often causes death in the best-grown or best-fattened animals in the group. While chiefly a disease

of pastured animals, it also occurs in housed animals where fodder containing the clostridial spores may be ingested.



Figure 14: Incised skeletal muscle over the left rump of a one-year-old bull containing blackleg lesions. Photo: Colm Brady.

Sheep

Bacteraemia/septicaemia and clostridial enterotoxaemia were the most common diagnoses at necropsy in sheep in the RVLs during April 2026.

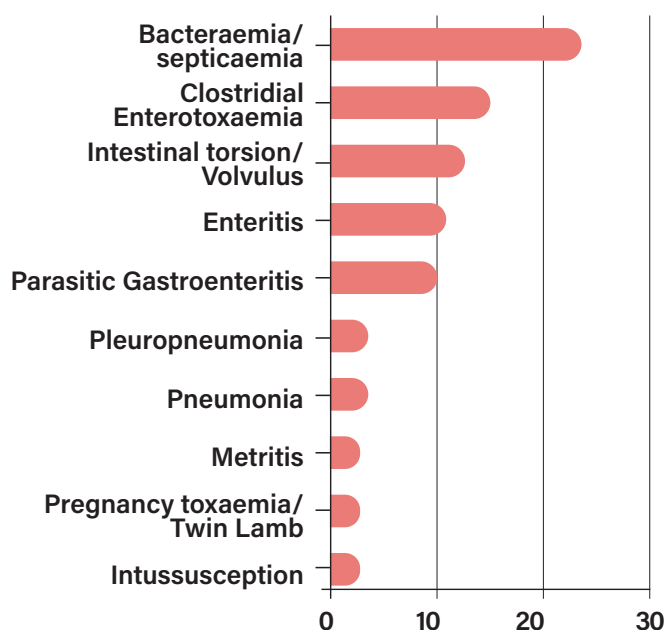


Table 2: The most common diagnoses in sheep submitted for necropsy in April 2026.

Gastrointestinal Tract

Intestinal volvulus

A 13-week-old lamb was submitted to Sligo RVL with a history of sudden death. On post-mortem examination, there was a complete intestinal volvulus or “twisted gut” with marked discolouration due to congestion of small and large intestines, and haemorrhagic intestinal contents. Faecal examination identified a significant burden of *Nematodirus battus* eggs. Intestinal volvulus or torsion in which no mechanical factor has been identified are often associated with changes in intestinal motility. Predisposing factors include: management or dietary changes, infections (e.g., parasites), enteritis, peritonitis, and electrolyte abnormalities.



Figure 15: Intestinal volvulus in a lamb. Photo: Rebecca Froehlich-Kelly.

Abomasal emptying defect

Athlone RVL examined a three-year-old ewe with a history of sudden death. There was a swollen abdomen due to a markedly distended abomasum extending from the diaphragm to the pelvis along the right side of the abdominal cavity. The abomasum was impacted with feed material. A diagnosis of abomasal emptying defect (AED) was made. Abomasal emptying defect is a chronic disease in sheep, particularly Suffolks, that is often fatal. It is characterised by a severely distended abomasum that fails to empty, causing anorexia, weight loss, and right-sided abdominal distension. It is considered a functional obstruction. Although the exact aetiology is unknown, it has been suggested that it may arise as a form of acquired dysautonomia caused by an unspecified toxin or mechanical factor affecting nerve function.

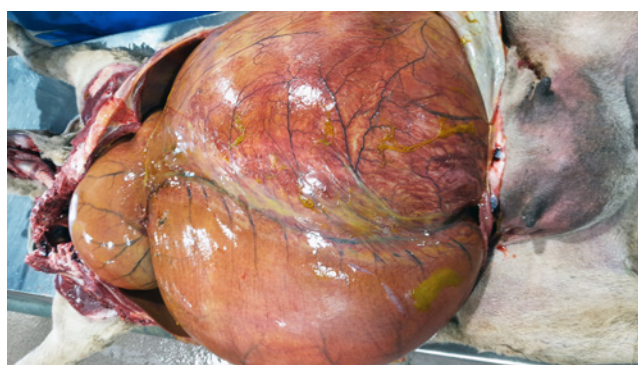


Figure 16: A markedly distended abomasum in a case of abomasal emptying defect. Photo: Denise Murphy.

Urinary/Reproductive Tract

Uterine prolapse

A three-year-old ewe was found dead with a uterine prolapse and was submitted to Kilkenny RVL. There had been additional cases of prolapse in the flock. On examination, the carcass was pale, and both the uterus and intestines had prolapsed. The liver showed evidence of suspected previous *Fasciola hepatica* infection. Calcium and magnesium levels in the vitreous humour were within reference levels. Liver cobalt levels were low. Cobalt is required for synthesis of Vitamin B12 by the ruminal microflora. B12 is required for

the metabolism of propionic acid by the liver for energy. It is not certain if there was a metabolic component in this case but increased prolapses in a flock may occur simultaneously with metabolic disturbances. Given the flock history of multiple prolapses pre- and post-lambing, several risk factors warrant consideration in this case. These include: excessive body condition (BCS 4 and above); multiple lambs in utero; high fibre diets; limited exercise in housed ewes; lameness leading to prolonged periods lying down; sub-clinical hypocalcaemia; genetic predisposition; and ewes with a previous history of prolapse.

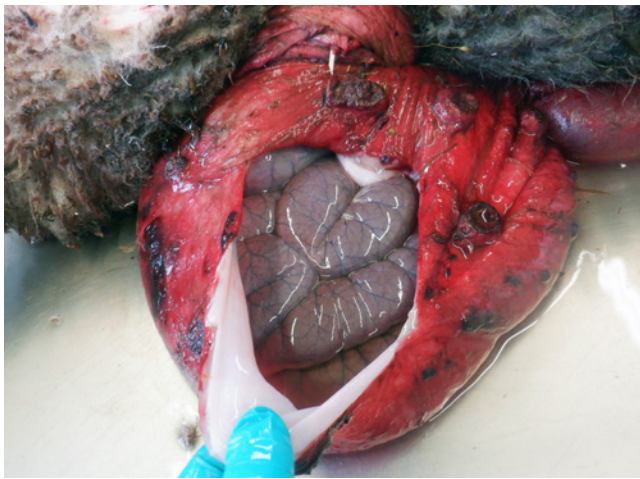


Figure 17: Uterine and intestinal prolapse. Photo: Aideen Kennedy.

Obstructive urolithiasis

Athlone RVL examined a four-week-old male lamb with a history of sudden death. There was marked subcutaneous oedema of the caudoventral abdomen from the prepuce to the perineum. The urinary bladder was markedly dilated with urine and there was marked haemorrhage of the soft tissue around the sigmoid flexure of the penis and towards the prepuce. The penile urethra contained white granular material around the sigmoid flexure, suspected to be urinary calculi. Kidneys were congested and friable. Phosphate crystals (struvite), which are common in fattening lambs, were detected in the urine. A diagnosis of obstructive urolithiasis was made. Prevention involves maintaining a 2:1 calcium-to-phosphorus ratio in the diet and adequate water intake.

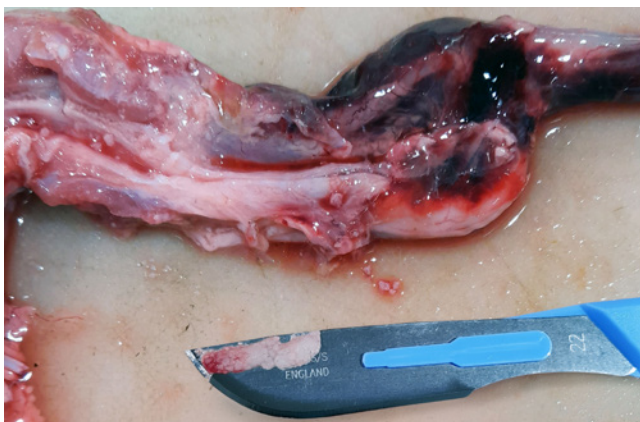


Figure 18: The sigmoid flexure of the penis (above) in a case of obstructive urolithiasis in a male lamb. Suspect urinary calculi (on the scalpel) were found. Photo: Denise Murphy.

Nervous System

Listeriosis

The carcase of a one-year-old hogget with a history of staggering and circling was submitted to Sligo RVL. On post-mortem examination, there were multifocal abscesses (approximately 1cm in diameter) across the liver surface. On histopathology, there was multifocal, acute, suppurative encephalitis with vascular cuffing, rarefaction, and microabscessation in the brainstem. The liver presented with multifocal, severe, chronic, suppurative hepatitis with abscess formation and bacterial colonies. While no pathogen could be detected by ancillary testing, histopathological lesions of the brain are highly suggestive of listeriosis.

Pigs

Salmonellosis

Three five-week-old, first-stage weaner piglets were submitted with a history of diarrhoea. In the cases of all three, colon contents were green and watery, and contained small strands of fibrin. In two pigs, there was necrotic typhlitis (inflammation of the caecum) evident on gross examination. Gross findings, particularly fibrin in the diarrhoea and the presence of diphtheritic membranes attaching to the caecal mucosa, led to a suspicion of *Salmonella enterica* involvement. Salmonellosis was confirmed in all three pigs upon bacterial culture.



Figure 19: Necrotising enteritis with diphtheritic membranes in the caecum in a five-week-old pig with Salmonellosis. Photo: Colm Brady.