



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

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Holiday Schedule

CAHFS will be open, but will have limited service on **Tuesday, November 11, 2014** in observance of Veteran's Day.

Bovine

Atypical interstitial pneumonia was the cause of a low incidence of **acute respiratory signs** and death in a group of 120 beef heifers on an irrigated pasture with occasional supplementation with hay and rice straw. Clinical signs included heavy breathing and refusal to walk. The animals had been on the same pasture for a few months and had no recent change of feed. In two heifers submitted for necropsy, the lungs were diffusely expanded, fleshy, and had large air pockets within the interlobular septa and mediastinum, and small to mid-size air pockets throughout the lung tissue. Testing for bovine respiratory viruses was negative. The cause of atypical interstitial pneumonia, also known as acute bovine pulmonary edema and emphysema (ABPE) is often undetermined as in this case. Known causes include recent access to rapid growth lush pastures, ingesting moldy sweet potatoes or perilla mint. In this case, the animals had been on an irrigated pasture for a few months.

Congenital *Neospora* infection was the cause of the **late-term stillbirth** in a beef calf. The submitted calf had no gross lesions but histology revealed **disseminated *Neospora* infection** with meningoencephalitis, pneumonia, myocardial necrosis and myositis. Immunohistochemistry was positive for *Neospora* in multiple tissues. The calf's immunoglobulin levels were elevated and it was seropositive for *Neospora*. Congenital *Neospora* infection is common, often resulting in mid-gestation abortion, but it is rare to identify significant lesions in a late-term fetus.

Lymphocytic leukemia caused marked **spleen** enlargement and **rupture** resulting in exsanguination into the abdominal cavity in two Holstein cows on separate dairies. One cow exhibiting signs of **abdominal pain** for 10 minutes prior to death had leukemia and lymphosarcoma involving lymph nodes, parotid salivary glands, mammary gland, uterus, abomasum and skeletal muscle. The other cow was from a herd with a history of cows that were **weak with difficulty walking** prior to death. Both cows were seropositive for Bovine leukemia virus.

Equine

Rhodococcus equi was the cause of an **epidural abscess compressing the spinal cord**, vertebral osteomyelitis, single pulmonary abscess and septicemia in a 14-week-old Thoroughbred filly that presented with a two day history of moderate **ataxia** of all four legs, fever of 103°F and elevated WBC count and fibrinogen. *Rhodococcus equi* was isolated from lung abscess, meninges and spleen.

Small Ruminant

Cranial mesenteric artery aneurysm rupture was the cause of death within 24 hours of the onset of lethargy and blood in the feces in a 2-year-old Saanen doe. On gross examination, there was a moderate amount of blood in the abdominal cavity and a large, organized blood clot around the 10 cm x 5 cm aneurysm which began approximately 1 cm from the origin of the artery at the abdominal aorta. Arterial aneurysms in livestock, especially young livestock, are rare, and the pathogenesis is unclear in this case.

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Your feedback is always welcome. To provide comments or to get additional information on any of the covered topics or services, please contact Sharon Hein at slhein@ucdavis.edu.



Small Ruminant (cont'd)

Crystal-induced chronic cholangiohepatopathy and photosensitive dermatitis were the cause of decreased appetite and skin lesions involving the axilla, eyelids and ears of two weeks duration in a 2-year-old crossbred ewe. Gross and microscopic examination revealed liver scarring and bile duct proliferation associated with crystals in bile ducts, renal lesions and icterus. *Tribulus terrestris* (puncture vine) and *Panicum* sp (kleingrass and panicgrass) are plants that can cause this condition in California. The ewe also had bilateral corneal ulcers from which *Mannheimia haemolytic* and *Moraxella* subgenus *Branhamella ovis* were isolated.

Pig

Hemorrhagic and proliferative enteritis due to *Lawsonia intracellularis* was the cause of bloody diarrhea for one day prior to death in a 7-month-old gilt. Four other pigs on the premises had bloody scours and one other pig had died. The jejunum and ileum mucosa was hemorrhagic and the lumen contained bloody fluid and clots on field necropsy. Histology on the intestine tissue submitted revealed proliferation of crypts with intracytoplasmic curved bacteria typical of *Lawsonia* spp.

Poultry and Other Avian

Anticoagulant rodenticide intoxication due to brodifacoum caused **hemorrhages** and increased mortality in juvenile and adult squabs. The two live 5-week-old birds submitted had prolonged clotting times, pale internal organs and dried blood covering the feathers over the body, wings and legs with no wounds seen. There were subcutaneous hemorrhages in the tissue around the joints and keel bursa. Brodifacoum was detected in the liver. Rodent anticoagulant baits had recently been placed in the pens.

Fowl cholera was diagnosed in 2-year-old laying hens in an organic chicken flock with recent increased death loss. Lesions in 13 dead hens consisted of fibrinous airsacculitis and serositis, necrotizing splenitis and hepatitis with numerous bacteria. Fowl cholera also caused a 20% death loss over 24 hours in 14-week-old turkeys on another ranch. Gross exam revealed mottled enlarged spleens and enlarged livers with white spots (hepatitis) in all eight birds submitted; two of these birds also had airsacculitis and pulmonary edema. *Pasteurella multocida* was isolated from multiple sites in all hens and turkeys.

Mycobacteriosis caused the death of an Owl finch, a canary, an Imperial pigeon, a green wing Macaw and a Military macaw from separate premises. Signs varied from **sudden death** in the finch and canary to 2 to 12-month history of **weight loss** and weakness in the 15- and 8-year-old Macaws and three days of weakness in the 20-year-old pigeon. Hepatitis was found in all birds with other organs including spleen, lung, bone, heart, joints, coelom, air sac and/or intestine also affected in different birds. *Mycobacterium genevense* was confirmed by PCR in the canary and pigeon and *M. hominissuis* was isolated from one Macaw.

Other Species

Myxomatosis due to poxvirus was the cause of **high mortality** in rabbits from two different premises in September. The disease spread quickly in one rabbitry. Clinical signs included **puffy eyelids and lips**, lethargy, and loss of appetite. The diagnosis was based on the presence of intracytoplasmic poxvirus inclusions in epithelial cells and hepatocytes and detection of Poxvirus by direct electron microscopy of a conjunctival swab in one of the cases. The poxvirus spreads mainly through flea and mosquito bites, but can also spread directly from animal to animal or by contact with contaminated fomites.

Septicemia due to *Aeromonas hydrophila* was diagnosed in four adult toads with lethargy, cloudy eyes, swollen legs and bodies. At necropsy, there was marked ascites. Numerous macrophages containing Gram negative bacteria and focal areas of necrosis were identified in the skin, liver, heart, kidney, intestine and spleen. *Aeromonas hydrophila* was cultured from the liver. *Aeromonas* can devastate captive collections as it has both contact and airborne transmission. In amphibians, the infection is associated with stress and poor quality of food and water.