



UC DAVIS

VETERINARY MEDICINE

California Animal Health and Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • MAY, 2016



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Holiday Schedule

In observance of Memorial Day, CAHFS will be closed on Monday, May 30, 2016.

Please plan your testing needs accordingly.

Announcements

The California Animal Health and Food Safety (CAHFS) Laboratory System is pleased to announce the launch of its new web site - www.cahfs.ucdavis.edu. With an updated look and redesigned test fee look-up we hope you, our clients, find it more informative and easier to navigate. We welcome your feedback - send your comments to daviscahfs@ucdavis.edu.

Bovine

Leptospirosis was diagnosed in four young beef calves that died over a period of two weeks. One of the calves submitted for necropsy was icteric, and had dark red urine, enlarged spleen and flabby liver. Histologically there was centrilobular hepatic necrosis with bile stasis, and tubulointerstitial nephritis. Leptospirosis was diagnosed based on compatible lesions and positive *Leptospira* spp. PCR on the kidney

Vertebral fractures were found in two, approximately 5-month-old Holstein heifers from the same premises that were submitted with a history of ataxia and crossing the front legs with occasional knuckling over. On necropsy, vertebral compression and fractures were found in mid-cervical vertebral bodies, with secondary compression of the spinal cord. The fractures occurred at the anterior growth plate. Cultures of the fracture sites yielded *E. coli* in one heifer and *Salmonella Dublin* in the second. It was hypothesized that these represented residual sites of infection in calves that suffered from clinically unapparent bacteremia by these agents earlier in life.

Bovine viral diarrhea (BVD). A live 2-year-old Jersey heifer was submitted due to poor condition, apparent weakness and pain with movement. Gross examination identified a chronic thoracic vertebral fracture with spinal cord damage. Further investigation revealed systemic BVD virus infection with minimal serological response suggestive of a persistent infection with BVD virus.

Equine

Equine herpesvirus type 1 (EHV-1) was the cause of **abortion** at 8-months of gestation in a Thoroughbred mare.

The fetus had multifocal areas of necrosis and/or inflammation in lung, thymus, liver, adrenal gland and small intestine. The fetal membranes did not have any gross or microscopic lesions. EHV-1 was detected by PCR and immunohistochemistry on the liver and lung, and was isolated from the thymus. Marked selenium deficiency was also detected in the fetal liver.

Pig

Porcine Reproductive and Respiratory Syndrome (PRRS) and Porcine Circovirus 2 (PCV-2) viruses infection were diagnosed in a live, 4-month-old gilt from a High School farm, that was submitted due to an ongoing respiratory problem that was not responding to antibiotic treatment. Grossly there was bilateral patchy lung consolidation. Histologically there was severe bronchointerstitial pneumonia, lymphoid depletion and nephritis. All bacterial cultures were negative. PRRS virus and PCV-2 were identified by PCR and immunohistochemistry, respectively.





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VETERINARY MEDICINE

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Small Ruminants

Leptospirosis was diagnosed in a 1-month-old lamb with a history of sudden death. At necropsy the lamb was icteric with mildly enlarged, and yellow to orange liver, mild pulmonary edema and dark red urine (hemo-globinuria). Histologically, the kidneys had mild nephritis, and the liver had hepatocellular disassociation. Fluorescent antibody test for *Leptospira* spp. on kidney smears was positive. Silver stains identified spirchetes present in the renal interstitium. Liver and kidney copper levels were within normal range.

Polioencephalomalacia (PEM) was diagnosed in two yearling goats with a history of illness of four to five days duration. The goats presented initially with difficulty walking, which subsequently evolved into recumbency and inability to walk and eat by day four. The hallmark PEM lesion of cerebral cortical gray matter laminar neuronal necrosis was present in both goats. One of the goats was also deficient in selenium, and the other goat was deficient in copper and had severe aspiration pneumonia, possibly as a consequence of the neurological signs presented.

Poultry and Other Avian

Bacterial valvular endocarditis was diagnosed in two unrelated backyard chickens from different premises. The mitral valve had large grey granular masses composed of organized fibrinocellular exudate with colonies of bacterial rods. Thromboembolic lesions were noted in other organs. Bacterial cultures were non-diagnostic.

Systemic fungal infection was diagnosed in 18-day-old, brown feathered, meat type chickens. The flock exhibited an increase in mortality, weakness, unevenness in size, dehydration, and leg tremors. Postmortem examination revealed yellowish

nodules in the cerebellum and air sacs. Histologically, multifocal granulomas associated with fungi were seen in the brain, air sacs and lungs. *Penicillium* spp. was isolated from the brain and *Rhizopus* spp. was isolated from the air sacs.

Fowl cholera due to *Pasteurella multocida* was diagnosed in 13-week-old Tom turkeys from a flock of approximately 5,000 birds. The flock experienced an acute onset of lethargy, lateral recumbency and increased mortality. Postmortem examination of a few turkeys revealed classical lesions of severely consolidated lungs with fibrin on the pleura but also enlarged and dark livers with pale foci of necrosis scattered throughout. *P. multocida* was isolated from lungs and livers.

Degenerative joint disease (DJD) was diagnosed in two unrelated adult ostriches with a history of ataxia progressing to inability to rise and death. Necropsy revealed severe DJD involving the hock joints in both birds. The cause of DJD is not known but genetics is suspected as one of the ostriches came from a flock of ostriches that was closed for about 20-25 years.

Marek's disease was diagnosed in two, 1-year-old Coturnix quail from a small mixed flock including layers, roosters, turkeys and quail. Clinical signs observed in affected quail included anorexia, depression and watery eyes. Reported mortality was 2.5% within one week. Lymphoma was seen in multiple organs including liver, kidneys, lungs, heart, intestine and nasal sinuses. Immunohistochemistry for Marek's oncogene (*Meq*) was positive in the proventriculus, conjunctiva, intestine and lungs.

