



UC DAVIS

VETERINARY MEDICINE

California Animal Health and
Food Safety Laboratory System

CAHFS CONNECTION

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Holiday Schedule

CAHFS will be closed on **Monday, September 7, 2015** in observance of Labor Day.

Please contact your laboratory to plan your testing needs accordingly.

Bovine

Granulosa cell tumor was diagnosed in a 3-year-old Angus cow with a history of anorexia, weakness and death. Gross lesions consisted of massive pedunculated, smooth surfaced, soft and tan tumors up to 150cm long by 60 cm in diameter attached to the surfaces of the pelvic and peritoneal cavities. The ovaries could not be identified grossly but the histologic features of the tumor masses were consistent with a granulosa cell tumor.

***Mycoplasma bovis* neuritis and meningoencephalitis** were diagnosed in an 8-month-old Holstein heifer with a clinical history of walking with an extended head and neck and a head tilt, progressing to recumbency and inability to rise. On necropsy, a 2-3 cm diameter area of chronic inflammation extended from the left trigeminal nerve along the left side of the cerebellum and formed abscesses in the ventral dura mater of the first cervical spinal cord compressing the cord. *Mycoplasma bovis* was cultured from the CSF and the brainstem. A middle ear infection was the likely source of infection.

Bovine herpesvirus-2 dermatitis was diagnosed on fresh skin biopsies/scabs from seven, 2- to 3-week-old calves on a calf ranch where 50% of the calves in a group of 200 had scabs on the ears and around the eyes. The virus was detected by PCR on scabs, and syncytial cells with intranuclear inclusions were seen on histopathology. Past cases have had 100% of calves affected by 3 weeks of age; flies are a possible mechanical vector between calves.

Equine

Hepatic encephalopathy due to Theiler's disease was diagnosed in a 7-year-old Quarter horse brood mare submitted following acute neurologic signs of stumbling and recumbency. The horse was icteric and the liver small and flaccid. Histologically the liver had severe bridging centrilobular hepatic necrosis and in the brain had lesions compatible with hepatic encephalopathy.

Myocardial arteriosclerosis was the cause of **sudden death** during exercise in a previously healthy 6-year-old mare. No remarkable gross lesions were detected but the histologic examination of numerous heart samples revealed severe regional arterial lesions (arteriosclerosis) confined to the left ventricular free wall. The adjacent myocardium exhibited degeneration and acute inflammation. No other vascular lesions were detected in other portions of the heart or in other organs.

Pig

***Streptococcus suis* septicemia** resulted in sudden death of four 2.5- to 3-week-old nursing pigs from two litters. Two pigs were found dead with no signs, one was lethargic the night before it died and the fourth had arthritis for over a week. *S. suis* was isolated from liver and/or brain of all four pigs and joint of one pig. Three of the four pigs had congested meninges from which *S. suis* was isolated but there were no histologic lesions.

Systemic Porcine Circovirus 2 (PCV-2) infection was diagnosed in three 3- to 4-month-old **poor growing** organic pigs. Severe emaciation and **lice** were found at necropsy. PCV-2 was identified by immunohistochemistry, associated with interstitial pneumonia, lymphoid depletion and nephritis.

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We're on the Web
www.cahfs.ucdavis.edu

Small Ruminant and Camelids

Bronchopneumonia and polyserositis were diagnosed in a Bighorn sheep lamb with a history of lethargy and inability to walk. Several of the nine other lambs in the flock had drooping ears, nasal discharge and coughing. At necropsy, the lamb had bronchopneumonia and fibrinous pericarditis, peritonitis and polyarthrititis. Histopathology of the lung had marked lymphoid follicle development and bacterial pneumonia. *Mannheimia haemolytica* was isolated from the lung, trachea and joints. *Mycoplasma ovipneumoniae* was detected by PCR in the lung and nasal swab. A subacute to chronic *Mycoplasma ovipneumoniae* infection probably predisposed to acute *Mannheimia haemolytica* infection.

Oleander toxicity and leptospirosis were diagnosed in a 3-month-old alpaca with acute, non-specific signs of lethargy and anorexia, followed by death. The animal had been used for weed control. Necropsy showed diffuse pulmonary edema, ascites, hydropericardium, epicardial and endocardial hemorrhages, and segmentally hemorrhagic small intestine with severe acute **myocardial necrosis** seen histologically, all suggestive of Oleander toxicosis. Oleander toxin was detected in the stomach contents. **Leptospirosis** was also suspected based on the presence of a moderate to severe, **chronic nephritis** and the kidney was positive for *Leptospira* by PCR and immunohistochemistry.

Poultry and Other Avian

Turkey Syndrome 65 (TS 65) also called “wry neck” characterized by crooked necks, slipped tendon (perosis) and airsacculitis was diagnosed in 7-week-old Heritage breed of turkeys due to *Mycoplasma meleagridis* (MM). These turkey poults came from a flock of 320 and had a history of trouble walking and increased mortality. Airsacculitis due to MM is common but manifestation of TS 65 or wry neck is rare. The pathogenesis of wry necks is not known but extension of airsacculitis of the cervicoclavicular air sac into the cervical vertebrae resulting in osteoarthritis, misshapen articular facets and cervical deformity is suspected.

Pigeon paramyxovirus 1 (PPMV-1) was diagnosed in commercial squabs experiencing increased mortality, depression, **torticollis and ataxia**. All six pigeons submitted had enlarged, mottled pale kidneys and in a few birds, mottled pale pancreas. Histology revealed **encephalitis, nephritis, pancreatitis and hepatitis**. PPMV-1 was differentiated from exotic Newcastle disease by PCR and DNA sequencing. This virus was also found in a second squab operation, a racing pigeon loft and wild doves and rock pigeons. The racing pigeons and wild birds had concurrent circovirus and other secondary infections.

Psittacosis due to *Chlamydia psittaci* resulted in death of a 2-year-old, female Bourke's **parakeet** that had a one week history of lethargy, sleeping throughout the day, and fluffed feathers. The owner had been losing birds for two years with these same symptoms. The significant gross finding was a moderately enlarged liver. Liver, air sac and spleen tissue impressions were strongly positive for *Chlamydia* by fluorescent antibody test. Immunohistochemistry on these and other tissues was also positive. Lesions of hepatitis, epicarditis, and airsacculitis were compatible with chlamydia. The zoonotic nature of psittacosis poses a risk especially to the elderly, children, and immunocompromised individuals.

Other Mammalian

Encephalitozoon cuniculi meningoencephalomyelitis and nephritis was the presumptive cause of a long progressive course of paresis in an adult Dwarf rabbit. The kidneys were grossly pitted with grey interstitial foci. Special stains revealed numerous gram positive intracytoplasmic organisms compatible with *Encephalitozoon cuniculi* in the brain and kidney lesions. This organism can be found in brain and kidney of rabbits without clinical signs and persist for long periods.

Deer adenovirus hemorrhagic disease was diagnosed in eight of 17 deer submitted to CAHFS during the first half of 2015. Affected counties included El Dorado, Marin, Mariposa, Siskiyou and Yolo. Lesions consisted of interstitial pneumonia and digestive tract hemorrhage with systemic vasculitis. Cases in 2015 likely represent eight unique events and are a continuation of outbreaks from 2014 which included four events from Amador, Shasta, Fresno and El Dorado counties.