UCDAVIS
VETERINARY MEDICINE
California Animal Health and Food Safety Laboratory System

CAHFS CONNECTION

LEADING DIAGNOSTICS NATIONALLY, PROTECTING CALIFORNIA LOCALLY • AUGUST, 2016

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Holiday Schedule

In observance of Labor Day, CAHFS will be closed on Monday, September 5, 2016.

Please plan your testing needs accordingly.

New Backyard Flock Submission Fee - Effective October 1, 2016

We at CAHFS value the importance of providing necropsy services for Backyard Flock (BYF) owners. However, with the increased number of BYF submissions over the past several years it is now impacting our ability to continue providing this service at no cost. While we want to maintain disease surveillance for backyard flock owners, it will now be necessary to implement a small fee. Effective October 1, 2016, CAHFS will initiate a $20 necropsy fee for BYF cases consisting of 1-2 chickens, turkeys, squabs or waterfowl from flocks with less than 1,000 birds. We appreciate your understanding.

Equine

Aortic rupture was diagnosed in a 23-year-old horse with a history of sudden death. On gross examination, the aorta was ruptured just above the aortic valves, and there was peri-aortic and mediastinal hemorrhage, and hemopericardium. Copper levels were within normal limits.

Rhodococcus equi infection was diagnosed in a 2-month-old foal submitted with a history of brief respiratory disease. Gross lesions consisted of multifocal to coalescing grey pulmonary nodules and caseous exudate in multiple joints. Histologically, the lung lesions consisted of pyogranulomas with large numbers of intracytoplasmic gram positive bacteria in macrophages. R. equi was isolated from the lung.

Nerium oleander (oleander) toxicosis was diagnosed in an adult pony with colic-like signs prior to death. Necropsy was largely unremarkable except for excessive pericardial fluid. Histologic examination of the heart revealed moderate to marked myocardial degeneration and necrosis with mixed inflammation. Oleandrin, the toxic principle of oleander, was detected in stomach content. The suspected source for the oleander was a brush pile that may have contained oleander trimmings.

Bovine

Ten out of 60 nursing beef calves died following a week of pneumonia signs. A 5-month-old steer submitted had bilateral lung consolidation with emphysema. Histologically the lungs had widespread bronchointerstitial pneumonia. **Bovine Respiratory Syncytial Virus (BRSV) infection** was confirmed by immunohistochemistry and PCR. The calves had been previously vaccinated with a multivalent vaccine containing killed BRSV.

Small Ruminant

Herpesvirus-like particles were associated with **late term abortion** in a yearling ewe with a single fetus which was autolyzed. Gross lesions were not seen but the liver had microscopic disseminated foci of necrosis. Routine tests were unrewarding but direct electron microscopic examination of liver revealed herpesvirus-like viral particles. The liver lesions were consistent with herpesvirus infection as seen in other species of livestock but the attempts to isolate or immunologically identify the specific herpesvirus responsible were unsuccessful.

Continued

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Pig

Porcine epidemic diarrhea virus (PEDV) infection was diagnosed in eight piglets from two different litters (5 and 7 days of age, respectively), submitted from a commercial hog farm with a history of diarrhea and increased mortality that started at approximately 4 days of age. All carcasses were markedly dehydrated and had segmentally distended small intestine and colon containing abundant, whitish fluid. Pooled intestinal contents of piglets from both litters were positive for PEDV by PCR, and negative for transmissible gastroenteritis virus and swine delta coronavirus, the other two main causes of viral diarrhea in young piglets.

Camelid

Disseminated coccidioidomycosis (Valley Fever) was diagnosed in a 14-year-old female llama that was found walking in tight circles and died shortly afterwards. Necropsy and histological examination revealed severe, chronic, disseminated pyogranulomatous disease with intralesional fungal spherules compatible with Coccidioides sp. affecting most severely the lungs, spleen and liver, with milder lesions in the brain, heart and adrenal glands. South American camelids are very susceptible to infection with Coccidioides sp. and the clinical signs of the disease vary depending on the extent of the infection and the organs affected.

Poultry and Other Avian

Histomoniasis was diagnosed in a 2-month-old bronze turkey based on gross lesions of multiple “bullseye” lesions in the liver and transmural necrosis in the cecum, and intralesional protozoa observed microscopically. There is currently no approved treatment for histomoniasis. The management strategy is diligent ”cleanup” practices and anthelmintic treatment to eliminate the round worm Heterakis spp., which carries this protozoa.

Control Measures for Highly Pathogenic Avian Influenza virus

The last Highly Pathogenic (HP) Avian Influenza (AI) outbreak in the U.S. decimated the national poultry industry. The reason for the extent of the outbreak is not clearly understood. While we know a lot about the virus and its cycle in the environment, including wild waterfowl carriers and their migration routes, we lack important knowledge about the cycling and persistence of these pathogens inside poultry premises. A collaborative effort between CAHFS and the School of Veterinary Medicine has been investigating how Low Pathogenic (LP) and HPAI viruses persist and the effectiveness of control measures, specificially footbaths. This small study concluded that HPAI is more persistent than LPAI. LPAI persisted 12 hours in organic material while HPAI could be found up to 48 to 96 hours depending on the organic material source. Footbaths (Quat and Phenol+-Glut based) reduced, but do not eliminate, AI virus on boots; therefore, providing a potentially false sense of security. Additional funding is being sought to continue studies in search of reliable and effective biosecurity measures for the control of AI viruses.