What is easy, cheap and fast? Cytology

Cytology is the study of individual cells without regard to architectural pattern or tissue of origin. It is a relatively noninvasive, easy, inexpensive and quick diagnostic tool that is available to any practitioner and is indicated in many dermatopathology cases. This inexpensive technique can provide key diagnostic information to the clinician and client, including the etiology of pustules, papules, nodules, tumors, draining tracks, chronic ulcerations, or plaques. The clinician can use results from cytology to inform the next diagnostic steps, such as biopsy, culture, or treatment.

Why Not Cytology?
Cytology can be limited by poor slide quality or collection artifact. Reactive hyperplasia cannot always be distinguished from neoplasia. Features used for grading, such as architectural pattern or invasion of a tumor, cannot be assessed. In cases where the cytologic diagnosis is unclear, the gold standard is biopsy and histopathology.

The Procedure – The best procedure may depend on the type and location of the lesion. Samples may be collected by 1) fine-needle aspiration of cells or material from a lesion; 2) fine-needle biopsy of various lesions; 3) impression smears made from the surface of intact lesions; 4) impression smears made from cut surfaces of surgically excised lesions (e.g., nodules or tumors); or 5) impression smears made after lancing pustules, papules, or other lesions.

What Do You Need?
A few basic supplies and instruments are needed:
- 20- or 22-gauge needles
- 6 to 10-mL syringe
- 5 to 8 glass microscope slides individually

NHVDL is Growing and We Seek Your Input

The NHVDL has added services and testing modalities, including new serologic and molecular diagnostic tests. We now offer tests for a panel of bovine diseases including Bluetongue, Brucellosis, Bovine Leukemia, Bovine Viral Diarrhea and Johne’s Disease. We also offer testing for small ruminants; Caprine Arthritis and Encephalitis, Caseous Lymphadenitis, and Brucellosis, In the following month we will be sending out a survey to our nearly 400 clients and those we hope to serve in the future. Watch for our survey and tell us how we can better serve you!
A ten-year-old female Macaw presented for necropsy at NHVDL, with the owner reporting that the bird was found dead in its cage after making a loud squawk. The bird was in good condition, with fresh macerated food in its ventriculus, evidence that the bird had been feeding at the time of its death. No obvious gross lesions were found at necropsy.

Microscopically, walls of arterial vessels in heart wall were thickened by foamy macrophages and proliferating subintimal smooth muscle, with occlusion of vascular lumina. These blocked vessels were surrounded by areas of cardiac muscle loss and fibrosis (chronic infarction). The lack of other signs of decreased cardiac output (e.g. hypoxic neuronal degeneration, hepatic congestion or pulmonary edema) suggests acute decompensation (“heart attack”).

Atherosclerosis in parrots is seen most often in Amazons, African greys and macaws. It has been associated with high-fat diets; research suggests decreased levels of in omega-3 polyunsaturated fatty acids such as α-linolenic acid, eicosapentaenoic acid and docosahexaenoic acid may in part cause this syndrome, as has been documented in other species, including humans. These compounds, found in higher levels in fish oil, flax seed and true nuts, are thought to have anti-inflammatory and anti-thrombotic properties. Most frequently, the only clinical sign in affected birds is sudden death, although dyspnea, lethargy or hind limb paresis can be seen. Major vessels are more often affected than the heart; mineralization of vessels may rarely be observed on radiographs in severe cases.

The most common sign is sudden death. It is clinically difficult to diagnose atherosclerosis and, therefore; it is mostly an unexpected finding at necropsy.

For information, please contact the NHVDL (603-862-2726) or send Inga an email at inga.sidor@unh.edu.

As Coggins Season Approaches

As we gear up for the 2012 EIA test season, we ask that you review important requirements for completing EIA forms and for sample handling.

The NHVDL is accredited by the USDA to perform EIA testing and our clients will be happy to know that there will not be an increase in Coggins fees. The AGID test is still available at $5.50 per test and results are available 24 hours after the sample is received. For those in need, the ELISA test is available at $20.00 per test and results are available within 2-3 hours upon receipt of the sample.

This is the third year of offering Global Vet Link (GVL) electronic submission of forms and reporting. Many practitioners use this web-based platform that connects state animal health and regulatory officials with veterinarian subscribers. It is recognized by all 50 states and the service eliminates paper submittals and allows the accredited veterinarian to include digital photos, visual tags, and electronic identifications with automatic uploads of IDs.

Coggins Test Requirements

- Forms must be signed by a federally accredited veterinarian.
- Telephone numbers of the stable, horse owner, and submitting veterinarian are required.
- A line for an owner or agent signature is also provided. This is optional and is intended to protect veterinarians against providing false information.
- Markings, whorls, scars, saddle or harness marks and brands should be adequately described and illustrated.
- Samples accompanied by forms with incomplete or improper information will not be accepted. Please write legibly on the blood tubes, numbering the forms to match the tube.
- Samples which are severely hemolyzed due to heat or cold may interfere with accuracy of the test and the NHVDL has the right to refuse.
- EIA forms should include the National Accreditation Number (NAN) of the submitting veterinarian. At this time, the NHVDL will not refuse a Coggins without the NAN, but the Category 2 NAN will soon be mandated. To acquire your number, contact the AVIC, Sutton, MA at 508-363-2290.

For more information visit www.GlobalVetLink.com or contact the NHVDL at 603-862-2726.