DISEASE AND PATHOLOGY

If you missed our great class in Virginia with avian vet David Crum, you will want to read this article by Jenny Drummey

Vets use the tools of clincial pathology to save your bird's life. Here are some examples of how this works. We recommend that birds go to their avian vet once a year for an exam and blood work.



Blood Work: Blood work is vital, and helps the vet determine a bird's overall health. Sometimes, a bird is too sick to have blood work performed. In this case, the bird is treated until she is healthy enough to have blood drawn. The maximum amount of blood drawn is 1% of body weight. For example, if a bird weighs 100 grams, the vet would take no more than 1 cc of blood. The usual amount of blood taken is usually 0.3-0.5 cc. Healthy birds have blood taken from the right jugular vein (the left jugular vein is small). If the blood is taken from the wing or leg, this can cause bruising (hematoma).

A Complete Blood Cell Count (CBC) is the count of all white and red blood cells. A healthy percentage of red blood cells is between 35-55% of the total sample. Generally, red blood cells are related to the distribution of oxygen throughout the body. White blood cell counts indicate immune function. Bird blood cells have a nucleus, and the count must be done by hand. White blood cells do not look the same across species. When the lab counts white blood cells in a sample, high counts of white cells can indicate problems. For example, a high white blood cell count can indicate the presence of parasites or infection. A CBC can be used to test for the cause of a chronic disease state (one that lasts for two weeks or longer, according to pathologists).

<u>Biochemistry Profiles:</u> Another vital tool to the vet is a biochemistry profile, but it must be done correctly. Be sure the vet uses a green topped tube when running a biochemistry profile, not a purple one.

Sometimes, the lab results can be inaccurate. For example, lab artifacts can affect samples, or a low plasma protein count could be the results of a bird not eating. High sodium (or salt toxicity) can cause plasma electrocytes to increase, as can dehydration. Be careful not to give your bird salty snacks.

A normal range for cholesterol is 600-800 (better to be under 200). An elevated cholesterol reading could indicate fatty artery disease, which is common in Amazons. Heart disease is becoming more of a problem for many species, due to poor nutrition.

A panel would also display uric acid levels, which can be related to poor kidney function and can indicate gout. Visceral gout can occur around a bird's heart (which is located in the center of his chest), liver, or other places in the body. Gout usually appears in the feet, though visceral gout will appear first.

The liver also plays a role in fat. Liver bile breaks down fats. Liver disease can be indicated by elevated bile acids in a chemistry panel.

Notes on Diet: A pellet-heavy diet can cause gout. Birds need variety. Try to avoid a seed-only diet as well, manufactured seeds are high in fat. Almonds can be toxic if fed in high quantities.

Milk thistle can by used to treat fatty liver disease. Avoid millet as a treat. It is like cotton candy for birds, and is not high-quality nutrition. Flax seed oil is a good supplement for kidney health.

Be careful not to restrict your bird's diet for the purpose of weight loss (under controlled circumstances it is okay). Birds have a high metabolism and can lose weight quickly. If your bird loses more than 10% of her body weight in a 24-48 hour period, she has lost too much weight.

Reproductive Cycles and Egg Laying: A chemistry panel can also provide information about calcium and phosphate levels. If these are elevated, it may mean the bird is in a reproductive cycle.

Any female has the potential to lay an egg. Egg laying is a tremendous drain on the bird's calcium levels. Birds who lay eggs repeatedly can be treated with Lupron injections. Do not reinforce reproductive behaviors.

Instead, if your bird does lay an egg, leave the non-viable egg in the cage, or replace it. You can use a tictac or jelly bean as an egg replacement for small birds. If a bird is egg bound twice, your vet may recommend spaying in which the oviduct is removed.

Avian Flu: Don't panic. Avian Flu has been occurring for years, but the concern is that the strain of H5N1 can jump to people. Avian flu is primarily a disease of poultry (most cases are the result of direct contact with poultry). The virus is spread in saliva and droppings. An infected wild bird poops in another bird's food and the virus can be ingested.

Practice normal biosecurity and common sense. Backyard bird feeders are more likely to spread salmonella than avian flu. Wear gloves when cleaning a bird bath or bird feeder. Don't eat, drink, or smoke until you've washed your hands after cleaning bird feeders and baths. At this time, we do not believe that avian Influenza can be contracted by eating eggs.

Chlamydia: Chlamydia is a disease that can be transmitted to people (diseases that can pass from birds to peoples are called zoonotic diseases). Because of this, vets must report cases of Chlamydia in birds to the state. Chlamydia cannot live outside the body. The best treatment is prevention. It is a big problem in birds sold in pet stores.

One indication of Chlamydia is neon green in urates in the droppings (which can indicate liver issues), or by the absence of fecal matter in the droppings (though this could also be caused by the bird being stressed or dehydrated). There's no perfect test for Chlamydia, but an antibody test can reveal if the bird has ever been exposed.

Aspergillosis: Aspergillosis is a fungus and can be managed but is not often curable. To prevent it, avoid corn cob bedding and high humidity. Aspergillosis can cause sinustitis and weight loss and can be indicated by an elevated white blood cell count. Aspergillosis can migrate to the liver, air sacs, and all over the abdomen. It erodes through the air sacs and other organs. Palm cockatoos and African greys are more susceptible. Aspergillosis is also a zoonotic disease: it can pass to people who are immunosuppressed.

Other Common Problems: Heavy metal toxicity can come from a bird ingesting lead or zinc (from jewelry, galvanized wire, and other objects). An x-ray can show the presence of some metal. However, if the bird has passed the metal, the toxicity can remain in the blood. Checking the lead and zinc levels in the blood is the only test to verify heavy metal toxicity. The treatment is an injection 2 times a day for 5-7 days till the metal passes. The vet may also flush out the bird's proventriculus.

The cause of PDD is unknown. Birds with PDD have neurological symptoms, and inflammation in the brain and digestive tract. Any species can be affected. The choice to treat is on an individual case. Owners of birds with confirmed cases of PDD might choose to euthanize. There has been some success managing PDD with Meloxicam. An x-ray of a bird with PDD will show an enlarged proventriculus and crop. Treatment can cure symptoms but not the disease.

Avian Gastric Yeast: This is a new disease that usually affects smaller birds. Symptoms include wasting away, non-digested seeds in droppings. Diagnosis is made though examination of the feces. There is no completely effective treatment and not all birds that have it show signs. Some are simply carriers.

SUPPORTING VETS

Most of our actual dollars are spent on vet care, but we still depend greatly on support and reduced costs for this important area of our help for parrots. Our deepest thanks to the veterinarians and labs that work with us. And Dr. Ann Piety, recently deceased, was a most special friend to the parrots of Phoenix Landing!

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