

Update on Avian Borna Virus and Your Parrot

Since 2008, Avian Borna Virus (ABV) has been identified in parrots suffering from proventricular dilatation disease (PDD). This virus has been associated with a wide variety of clinical presentations, including gastrointestinal dysfunction, neurologic illness, and feather destructive behavior. Fortunately, although many parrots are infected with the virus the majority do not seem to be affected by it. In fact, it has been shown that about 40% of clinically healthy birds may be positive for ABV. Not all birds infected with ABV will develop PDD as the incidence of PDD is much less prevalent. A positive test is not a death sentence as the majority of infected birds are clinically normal, and clinically diseased birds can often be treated.

Current research suggests birds become infected with ABV by contact with infected feces and it is suspected that infection may even occur in the developing embryo while the egg is still in the hen's body. Borna virus is an RNA virus and is highly unstable in the environment. Therefore, routine disinfection and good hygiene is likely to reduce risk of infection. There is currently no vaccine for ABV. Blood testing can be done by your avian veterinarian.

The virus infects the nerves and causes the immune system to react strongly to the virus. The clinical effects depend on the organ system affected (weight loss/stomach, seizures/brain, heart disease/heart, etc).

Our current diagnostic recommendations include:

1. Screening new birds introduced to the flock. This may include a blood and cloaca swab to test for ABV DNA (also called a "PCR" or Polymerase-Chain-Reaction).
2. Testing birds with compatible clinical signs. This includes a blood and cloaca swab to test for ABV DNA, and serologic antibody testing for proteins associated with nerve injury (called an "AGA" or Anti-Ganglioside Assay). Routine blood testing (complete blood count and plasma chemistries) will be run to rule-out concurrent disease processes. A lead test may also be run for birds with neurologic signs.

Healthy birds that are positive for ABV should be monitored for development of neurologic or gastrointestinal signs and feather/skin damaging behavior. Stress is thought to play a role in the development of clinical disease. As for any healthy bird, routine veterinary evaluations are recommended. This is especially important in birds that test positive. Nutrition should be optimized and body weight should be monitored.

Birds that develop PDD should receive proper veterinary care. There are several treatments that have been shown to improve the quality of life of (and in some circumstances, cure) affected individuals. The mainstay of treatment is the use of a non-steroidal anti-inflammatory medication, celecoxib. We focus on optimizing good nutrition, reducing environmental stressors and trying to suppress reproductive activity, such as egg laying in hens.

There are several other infections that can mimic ABV-associated ganglioneuritis (nerve body inflammation) and the approach to diagnosis and treatment is the same. It appears that ABV does not grow in mammalian cells, so disease in humans, dogs, cats, rabbits, etc. is thought to not occur.