

Avian Polyomavirus

Polyomavirus has taken a great toll on the avicultural industry in the U.S. as well as caused much heartbreak and controversy among owners, breeders and pet stores. The disease is predominately manifested as an acute death in well-fleshed fledgling birds with classic signs of hemorrhage, pale breast musculature, petechiation and ecchymosis on the heart, pericardial effusion, and a swollen, pale liver. Research has indicated that adult birds may be as susceptible to polyomavirus as are juveniles; however, they rarely develop clinical disease. This susceptibility of adults may act as a reservoir in an aviary or pet store population.

Two tests are currently available. The first, PCR (polymerase chain reaction), tests the bird's DNA. This test can be performed on a cloacal swab, where a positive result indicates that the bird is currently shedding the virus. The same test, when applied to serum, will show recent exposure to the virus, while portions of the viral DNA are still present in the circulation. In the absence of clinical disease, a positive serum PCR test does not indicate whether the bird has overcome the infection and will survive.

The second test is an antibody test, which demonstrates previous exposure to the virus.

Whether a clinically normal adult bird can harbor this virus latently is not known. Extensive research at the University of Georgia has failed to locate any site of latency in non-budgerigar species of psittacines.

A vaccine is available, and should be administered at 2-3 week intervals, starting at 4-5 weeks of age, and continuing until the bird is immune competent if it is to be exposed to other birds. This may necessitate two, three or even four vaccinations.

The current practice in the U.S. of selling young birds to pet stores while they are still hand-feeding has served to promulgate this disease. The pet store then houses these birds in the same enclosures as birds from other sources and sells them while they are still not weaned, often to inexperienced owners. In addition to the greatly increased risk of polyoma exposure with this sequence, the incidence of hand-feeding accidents such as crop burns and aspiration pneumonia, and the inadvertent starvation of birds by first time owners, are frequent occurrences.

Unfortunately, the economics of aviculture make it unlikely that this will change in the near future, especially with the myth that a bird that is hand fed by its new owner will bond more effectively. Hopefully, the combination of public education and the increased prevalence of vaccination against polyoma will eventually decrease or eliminate its devastating effects.

For more information on this disease, speak to the veterinarian who is treating your pet.

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