



## Royal Animal Hospital

### Psittacine Beak and Feather Disease

PBFD is caused by a Circovirus. This virus is hardy and can survive in the environment. This makes transmission by inanimate objects possible, as well as direct transmission between birds. The disease can be spread by inhalation or ingestion of feather dust, faeces, and oral secretions of infected birds. Females may pass it through their eggs to their young.

The birds that can be affected include cockatoos, lorries and lorikeets, ring-necks, lovebirds, African Greys, Eclectus parrots, budgerigars, cockatiels, pionus parrots, Macaws, Amazons and even canaries, among other species.

Signs of disease and time from infection to symptom development varies with species, age the bird is at exposure, maternal antibodies, viral variant, viral load, route of exposure and the health of the bird when exposed to the virus. Some birds do not show symptoms for several months or years; others die within 3-4 weeks of infection. Adult birds over 3 years old appear to be very resistant to the disease. They develop antibodies and remain clinically normal.

Clinical signs include feather loss, abnormal pin feathers (constricted, clubbed, or stunted), abnormal mature feathers (blood in shaft), lack of powder down, and varying degrees of beak abnormality. Pigment loss may occur in colored feathers. The feathers fall out easily and grow back slowly or only partially. Beaks have been described as shiny (due to lack of powder down), overgrown, brittle and broken, or with palatine or beak necrosis. Birds may have feather lesions, beak lesions, or both. All lesions are progressive. Diarrhoea, regurgitation and depression may be noted prior to the onset of feather abnormalities.

Immunosuppression is part of the syndrome. This leads to increased susceptibility to all other infections.

A peracute form is also seen in young birds in which they develop pneumonia, enteritis, rapid weight loss and death. Lethargy, weakness, and pancytopenia (low numbers of all blood cell types) are seen in African grey parrots because the virus attacks the bone marrow.

All new birds should be tested for the virus at the time of purchase. Alternately, testing can be delayed a month so that if the bird was recently exposed it will have time to develop the viraemic state. The most conservative method would be to test blood initially after purchase



and repeat the test in 30 days. Testing of new birds is useless unless all other birds in the aviary are also tested. Birds with a positive test should be removed immediately from the aviary as they potentially can shed massive amounts of virus. Routine hygiene methods are essential in prevention too. Bird owners should avoid handling other people's birds as they may carry the virus to their own birds.

**References:**

*Selected Infectious Diseases: A Review for the ABVP II, ABVP 2006, David N. Phalen, DVM, PhD, DABVP (Avian)*

*Selected Avian Infectious Diseases, Atlantic Coast Veterinary Conference 2007, Sonia M. Hernandez-Divers, DVM, DACZM*

*Common Avian Infectious Diseases, International Veterinary Emergency and Critical Care Symposium 2007, James K. Morrissey, DVM, DABVP (Avian)*

*Acute Onset PBF in an Adult Congo African Grey, AAV 2007, Todd Driggers, DVM*