

Psittacine Beak and Feather Disease, the Lurking Epidemic



Psittacine Beak and Feather Disease (PBFD) is caused by a circovirus and is highly contagious. Think how easily the 'flu is spread between people, that is how easily this disease spreads between birds.

The virus is shed in the faeces and feather dust of infected birds and is extremely resistant, able to survive in the environment for months.

PBFD affects birds differently depending on the age of the bird when first exposed. Very young birds (hatchlings) may develop the acute disease. This mostly presents as poor appetite, crop stasis, diarrhoea and death within a few weeks. They are often infected while being fed by their parents (who may be carriers). These babies do not always show feather signs.

The typical signs associated with PBFD in adult birds include feather dystrophy and progressive baldness. Most of the birds that we see with PBFD started showing symptoms at less than one year of age.

Birds exposed for the first time as adults are less likely to become ill. They may become carriers (healthy but still able to transmit the disease to other birds).

The virus affects the cells of the feather follicles, beak and immune system. It has no effect on grown out feathers but damages those forming at the time, leading to progressive baldness which worsens with each moult.

The pattern of feather loss seen in a chronically affected bird depends on which feathers are moulting at the time. Early signs include loss of the delicate powder down feathers leading to a decrease in the white powder seen on healthy birds. The beak also becomes shiny from lack of this powder. Newly grown out feathers may be sparse, retain their sheaths, have blood in the shaft or be deformed. Often the feathers over the ears are thinning. Feathers may change colour (eg normal body feathers may grow out pink in African Greys).

Feather plucking birds may be confused with PBFD birds but those feathers (eg on the head) that the feather plucker cannot reach are generally in good condition. In situations such as some breeding pairs the mate may pluck the feathers on his partners head. This once again makes the distinction between a plucked bird and a PBFD bird more difficult.

Another common sign of chronic PBFD is recurrent infections. The gut and the respiratory tract are often affected. PBFD causes severe immunosuppression (as does the HIV virus in people) and just like with AIDS in people, the bird will most likely die not from PBFD itself but from another opportunistic infection that the birds damaged immune system cannot properly fight.

The bird on the right has the common PBFD sign of shortened choanal papillae. These are the tiny spikes seen on either side of the choana (the slit in the roof of a birds mouth, connecting mouth to nasal cavity).



The choanal papillae become blunted with chronic respiratory conditions and so shortened papillae are indicative of a bird with a poor immune system, not necessarily an indication of PBFD.

The bird above also displays another typical sign of advanced PBFD, beak necrosis. The virus affects the growth of new beak so in advanced disease, the beak may crack, flake or literally rot off.

Although there is no specific treatment or cure for PBFD, infected birds may live for long periods of time before finally succumbing. Although it is possible to keep infected birds alive for extended periods, it is highly recommended that birds showing feather signs (meaning that they are chronically infected) should be euthanased. They shed massive amounts of virus into the environment and pose an unacceptable risk to other psittacine birds around them.

The only sure way to prevent PBFD from affecting your birds is either to maintain a closed flock or to test every single new bird for the disease. The blood test, using PCR technology is highly accurate and sensitive, meaning that there is an excellent chance of picking up an infected bird.

The incubation period of PBFD may be as short as 3 weeks but if the bird becomes infected shortly after a moult, feather signs may not appear for six months or more. Thus even a perfectly feathered, healthy bird may be a huge risk to an established flock or to other birds in the home.

If a bird tests positive on PCR but is not ill and has no feather signs, there is a chance that the bird has been exposed to PBFD but is not chronically infected. This bird should then be quarantined for 3 months and then re-tested. If still positive, the bird is a true PBFD. If the bird now tests negative, it has managed to overcome the infection and has, in effect, become “naturally vaccinated”.

Several different groups of researchers are at present working on a vaccine for PBFD. The research and clinical trials will still, in all likelihood take several years. An effective vaccine would save millions of rands worth of psittacine birds every year, worldwide.

At this point PBFD is extremely widely spread in South Africa. You as the owner/breeder are the only one who is capable of ensuring that your flock remains free. Once you have PBFD in your birds it is **EXTREMELY** difficult to eradicate. The disease will wreak havoc in your flock and by the time babies have started dying, it is too late.

Test your birds. Only buy from trustworthy sources (many breeders will supply PBFD free certificates with birds when you buy them) and never take on a bird in poor condition because you feel sorry for it or because it looks like a bargain.

Dr Dorianne Elliott