



## “Young Bird Disease”

**What is it and what to do about it?**

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The term ‘Young Bird Disease’ refers to a condition where young pigeons, usually in the first few weeks after weaning become quiet, fluffed, lose weight, develop a green mucoid diarrhoea and die. The cause is a virus called Circo virus.

The term ‘Young Bird Disease’ is in my mind a poor one and one that I think should be abandoned. The problem is that it groups a whole lot of diseases that cause similar symptoms into a single category. As the way these diseases are caught, transmitted and indeed treated are different they need to be differentiated. Fanciers run the risk of seeing any young pigeon with these symptoms and simply putting them down to ‘Young Bird Disease’ when in fact all he is acknowledging is that the young pigeon is sick with wasting and diarrhoea. Coccidiosis, Adeno-coli syndrome, Chlamydia, Salmonella, E.coli, Herpes virus, thrush, hair worm infection, internal canker, Aspergillus and many other diseases can all cause similar symptoms. A much better term which actually states the true nature of the infection would be Pigeon Circo Virus Disease, so that instead of a fancier saying his pigeon had ‘Young Bird Disease’, the fancier would say, after an accurate diagnosis that his pigeons had Pigeon Circo Virus Disease.

Circo virus is an infectious transmittable virus that spreads from one bird to another. The virus is shed in droppings, tears, saliva and possibly also feather debris.

Once in the loft it can be assumed that every pigeon will be exposed to the virus and that the vast majority will actually become infected. Typically however only about 5% actually show symptoms, while the other 95% although infected with the virus do not develop clinical symptoms i.e. do not become sick. If tested at this time, they will return a positive result and are infected, but look completely normal sitting on the perch.

Birds that do become sick develop the typical symptoms of weight loss, lethargy, diarrhoea and some will develop yellow scum in the mouth. These birds almost invariably die. The ones that do not become sick after a period of time clear the virus from their system. We do not currently know how long this takes but it is thought that the majority will clear the virus from

their system in about 4 to 6 months. There is the possibility however, that some birds will fail to clear the virus and remain as persistent carriers.

The significance of Circo virus infection is that while the virus is active in the bird it interferes with the functioning of the immune system. Specifically it targets a particular type of white blood cell called the T lymphocyte. This means that the pigeons ability to resist other infections is compromised while the virus is active. For this reason in some parts of the world Pigeon Circo Virus is called pigeon AIDS.

Often what alerts us to a Circo virus infection is an increased incidence of these secondary diseases. If your birds are experiencing a higher level of canker or eye colds than normal or if the problem quickly comes back after treatment it may be that Circo virus is the underlying cause. When disease proves difficult to control or behaves in an unpredictable manner it's always worthwhile asking your vet to check for a concurrent Circo virus infection.

### **Two Waves of Loss**

Typically when Circo virus gets into a loft there are two waves of loss. The first of these occurs when the virus first enters and works its way through the loft. As mentioned earlier, about 5% of the birds will be lost. As the weeks roll by after the last death it is easy for the fancier, who has not been to a vet, to think that the problem is now past. In fact all of the surviving birds in his loft, which may look completely normal are now infected with the virus and until they throw the virus off in a couple of months, have an impaired immune system and increased vulnerability to secondary disease. Typically these secondary diseases are wet canker and Chlamydia (respiratory infection) although they can be any disease. Pigeons rely on exposure to a whole range of potential disease causing organisms during growth including these two to develop a good natural immunity. If Circo virus is active this immunity comes, but takes much longer. This is where the second wave of loss occurs. Fanciers who fail to identify and manage these problems tend to lose a lot of pigeons tossing and in the early races. It's not that the pigeons are not any good, it's just that too much is being asked of them. If they were 'nursed' along until a bit older and any secondary diseases monitored and treated as required many of these lost young birds would go on to make good race birds.

### **How Does the Disease Get Into the Loft?**

Often the virus enters with a young bird deliberately entered from another loft where Circo virus is active. Remember that 95% of young birds in an infected loft do not show any symptoms, and so this introduced youngster does not have to look sick or in fact ever get sick. It will however shed the virus and infect other birds for several months until it, like the majority of birds, clears the virus from its system.

### **How is the Disease Diagnosed?**

It is very easy. The disease can be diagnosed from a single drop of blood. In Australia test kits are mailed to fanciers. All the fancier does is prick the

birds toe, just above the claw. When a drop of blood oozes onto the skin it is wiped off with a thin strip of supplied blotting-type paper and placed into a small cliplock plastic test tube. This is then mailed to the vet for testing. Once collected the sample is good for weeks, and so there is no problem if it takes a couple of days for the sample to reach its destination. The test is called a PCR and checks for Circo virus DNA in the birds' blood. It is very accurate and in Australia costs the equivalent of 25 pounds or US\$50. Of interest, Chlamydia infection can also be checked from the same sample. The disease can also be diagnosed through microscopic examination of tissues collected during an autopsy. Here, the tissues are stained so that the virus can actually be seen. In other birds including parrots a HI/HA blood test is also available that tests for viral protein and also the amount of immunity already formed by that bird.

### **What to do if Your Birds have 'Young Bird Disease' i.e. Circo virus infection?**

The first thing to do is accurately establish the diagnosis. This means contacting the vet. If you have several young birds become sick, don't assume a diagnosis. The problem may be Circo virus or it may be one of the other problems mentioned earlier. Don't rely on the old guy down at the club or your neighbour who also races pigeons. They don't have the diagnostic testing available and this simply wastes time. Similarly don't go to the local dog and cat vet. If he doesn't do a lot of bird work, he can't be expected to know and it is therefore unfair to be critical of him. Go to a qualified avian vet or a vet with a lot of bird experience. It's worth mentioning here that avian birds can be thin on the ground, but you don't have to be near one. Phone to have a test kit mailed out to you or organize to send a live bird to them via courier. 50% of the thousands of fanciers who use my clinic as their veterinary provider live more than 50 miles from the clinic.

Do bear in mind that antibiotics kill bacteria but not viruses. There is no medication that can be routinely prescribed that directly kills viruses. This means the infection needs to be brought under control by other means. In some areas of the world a vaccine for pigeon Circo virus is available. Where available routine vaccination of 6 week old youngsters is recommended.

### **What to do if the problem is diagnosed in your loft**

In the face of an outbreak, where available, all youngsters should be vaccinated. After this the following 4 point plan is adopted:

1. separate sick birds; treat them with a broad spectrum antibiotic e.g. Baytril 2.5% four drops once daily orally and an anti-canker drug e.g. Spartix 1 tablet daily. And place an electrolyte/glucose preparation e.g. Electrolyte P180 in the water. If the birds fail to respond in a few days, they are often best eliminated.
2. to minimize viral build up in the loft ensure the loft is regularly cleaned and kept clean and dry.
3. care for the birds as well as you possibly can so that the majority can

mount a good immune response to the virus i.e. 'fight' the disease. This means, no over crowding, a good diet, good parasite control and treating any secondary diseases identified through testing.

4. give probiotics, giving probiotics e.g. 'Probac' will decrease the impact of the disease. This is not a treatment for sick birds but if a bird is exposed to Circo virus while it is on probiotics it is that much harder for the virus, or at least an overwhelming dose of the virus, to infect that bird. I usually recommend 'Probac' be placed in the food or water for 2 weeks initially and then for 2 to 3 days each week until the virus has worked its way through the birds i.e. it has been several weeks since a bird has got sick.

After this do nothing except provide good care until the start of tossing. Then have the birds checked i.e. crop flush, fecal smear and Chlamydia test by a bird vet. Any disease that the bird has not developed a good immunity against i.e. still detectable should be treated and controlled so that the second wave of loss is avoided.

Do note that killing sick birds is not a way of eliminating the disease from the loft because the majority of infected birds show no symptoms.

Although it can be frustrating to loose 5% of the youngsters, the important thing to remember is that 90% of the birds in a typical out break do not die. The team is therefore essentially intact and with correct management can still go on and win if the birds are good enough.

A good thing is that it appears that recovered birds do develop a good immunity to the disease. This has been shown to occur with Circo virus (a different but related virus) in parrots. It also appears that this immunity can be passed through the crop milk and indeed the egg (the yolk which is sucked into the abdomen during development, contains lots of antibodies and hatching chicks also gulp and swallow some of the egg white (which also contains immunoglobins) which coats the lining of the bowel). Because of these and other factors the effect of the virus dramatically reduces each year.