

SOME COMMON AVIAN DISEASES

By Dr Rob Conradie (Updated July 2026)

Ornithosis/Chlamydiosis / Psittacosis (*Chlamydophila psittaci*)

This disease is caused by *Chlamydia psittaci*.

Transmission

Elementary bodies (infective parts of the organism) are commonly found in the loft. They are found on feather dust (bloom), dried faeces, loft surfaces and in respiratory system discharges (aerosols) of infected birds and birds that are carriers.

These organisms are then spread by air circulation within the loft. They then settle on the mucous membranes of upper respiratory system and eyes where, depending on the immune status of the bird, can cause mild to severe illness. These organisms can also be transmitted from the hen to the egg (vertical transmission,) resulting in chicks being born with the disease.

Symptoms

The organism is wide spread and can live in the environment for several weeks. It is unlikely that there are any pigeons that have not been exposed to varying numbers of the organism, with race baskets being the biggest source of infection.

Symptoms shown vary tremendously and are very dependent on immune and nutritional status/stress levels etc. of the birds

Symptoms most commonly found are:-

- Poor race performance.
- Unwillingness to fly around loft.
- Red throats sometimes with mucous "strings"
- Brown wattles especially the area directly above nostril opening.
- Conjunctivitis "one eyed cold". Bubbles are often seen in the excessive tears produced. Birds often rub their heads on their wing butts (shoulders).
- Respiratory distress.
- Green diarrhoea if liver is affected.
- Death in severe cases.

Diagnosis

This can be made in the live bird by doing various tests on blood and throat samples.

Treatment

Doxybiotic Plus (**Doxybiotic S** in cage birds) is the treatment of choice.

Various treatment protocols can be used:-

- When the disease has been confirmed with laboratory tests, treat for 20 days.
- When the disease has been a problem in previous years, treat for 10 days before the race season (April/May in SA)
- As a preventative treatment during the race season treat for 3-7 days.
- During treatment all sources of Calcium (e.g. grit and minerals) must be removed.
- Lewerstim can be added to the Doxybiotic every 3rd day. Enteroplus or Intestum can be given with, and after the Doxybiotic.
- Wherever possible, boost immunity with Medimune, Enteroplus, Vitaton 34 and Intestum.
- Doxybiotic should be used every 6 weeks during the race season. This is done as a preventative measure.
- Avoid stress situations e.g. overcrowding.

Salmonella / Paratyphoid

Typical pigeon Paratyphoid is caused by *Salmonella typhimurium* (var Copenhagen) but there are many more species, subspecies and serotypes. About 2500 to 3000 all told. This figure will possibly change over the years.

Transmission

Horizontal

Salmonella are the normal intestinal flora of reptiles especially lizards and snakes and rats and mice. They carry Salmonella in their faeces Food and water can be contaminated by them.

Other active carriers would be strays, ferals and newly introduced breeding stock birds. Remember though that the bacteria are carried mechanically on the feet of anything that enters the loft environment.

This would include any insect, mammal, the fancier himself if he has visited an infected loft and visitors coming from an infected loft.

A route of infection overlooked is an infection picked up via **food and water in the race baskets.**

A study done in Belgium found that towards the end of the race season when the birds have been under stress for many months the level of infection found in the faeces in the race baskets was above 70%.

Vertical

This is where the infection is transmitted via the hen to the egg. The cock could be carrying the infection in the testicles or the hen, in her ovaries. Both hen and cock could be carriers.

Symptoms

Vary tremendously.

- The bird can be in perfect show pen condition but still be a *carrier*.
- *Diarrhea* when the bacterium first enters the body.

If the lining of the intestine is not being protected adequately by good bacteria, ideal pH is not kept and if the lining has been damaged by Coccidia and worms, it can easily enter the blood stream settling on:

- Joints – especially larger ones of wings and legs
- Ovaries and testicles, leading to early infertility.

When bacteria are passed into the egg it leads to embryonic death (dead in shell), poor development of youngsters and often death before weaning. Survivors are carriers for life.

- Bacteria settling in the brain causes abscesses, leading to symptoms very similar to Paramyxo.
- Pan ophthalmitis (infection of the whole eyeball). We often see this as blood clots in the eye.
- Fasciitis (like myositis). This symptom is being seen more often. It is inflammation of the breast muscle and tendons. The bird is unable to fly and sometimes lies on its side in severe cases. The wing joints themselves appear normal.

It is often confused with muscle and wing disease.

- Respiratory symptoms
- Sudden death despite the bird being in good condition.

Diagnosis

Made on history, clinical symptoms and laboratory testing.

The Medpet Salmonella test kit has proved to be a very useful diagnostic tool.

The kit can be bought from Medpet for the fancier to do it themselves or it can be incorporated into the standard diagnostic tests we do at the different pet shop venues. For those that live outside Gauteng, samples can be sent to us via Postnet.

Prevention treatment and control

A10 to 14-day treatment of Mediprim and Medicox before the race or breeding season has proven to be an effective preventative and whenever a diagnosis of Salmonella is made during the race season.

During the race season, allowance has to be made for basketing and the race. The treatment would have to be broken up into 2 or 3 four-day sessions given Sunday to Wednesday.

The mixture is often used as one 4-day session for respiratory infections.

Two alternatives to Mediprim and Medicox can be Avivet and Trimethoprim-Sulfa. Research done by a Belgian bacteriologist has shown Amoxycillin (Avivet) to be very effective.

To aid prevention of the disease:

Probiotics: Entero-Plus and Intestum

Intestinal acidifiers: Optigut pH

Regular treatment against worms and Coccidiosis. They damage the intestinal lining and allow the Salmonella to establish themselves and gain entry into the blood stream.

Salmonella can be a very difficult disease to treat and control.

In the environment of the loft, drinkers and water bowls it forms a biofilm which is a coating around the bacteria that is very difficult to remove with standard disinfectants.

If you can't remove the biofilm, you can't kill the bacteria. The best one to use is

F10SCXD. It has an added detergent.

During treatment and routinely thereafter the loft must be disinfected. Failing to do this results in the birds becoming reinfected.

In SA we probably have a similar trend to what is found in Europe where Salmonella infections increase as the season progresses. Federations should disinfect their baskets, especially the water troughs, every week.

Use the **F10SCXD** for best results.

***Candida* / Yeast Infection**

This is caused by a yeast called *Candida albicans*. This is a "normal" inhabitant of the gut but will proliferate rapidly under favourable conditions.

These are:-

- Primary infections by viruses often seen with young bird disease. The increase in incidence we see with Candida corresponds with the same increase in incidence we see in YBD. In 2019 we saw most cases of Candida in May, June and July. Over this period we were seeing the most cases of YBD.
- Overuse of antibiotics without counteracting their effect with pro/prebiotics like Intestum and Enteroplus.
- After treatment with Canker medication.
- Stress, poor feeding, quality of food and management.

Symptoms

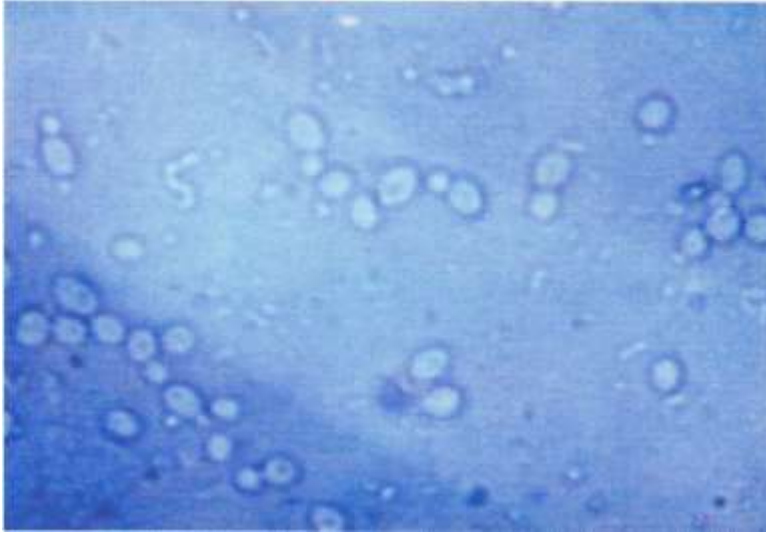
- Delayed emptying of crop ("slow crop"). Food is still present in the crop in the mornings.

- Poor performance

Other symptoms may be shown but are often as a result of the primary infection

Diagnosis

Easily made by taking crop scrapings or a crop flush. The budding yeast are easily identified as can be seen in photo. The more budding that is seen the more significant the problem.



Prevention and treatment

Prevented by regular use of **Intestum** and/or **Entero-Plus** especially after a course of antibiotics.

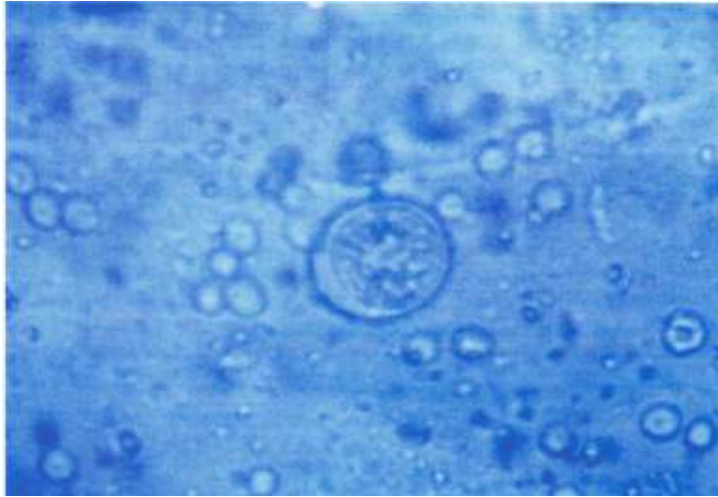
Medistatin used for one or two days every week during the race season helps counteract the effect of any virus that may be present or the effect of any antibiotic or Canker treatment that may have been given. It is safe for use in the racing and breeding season.

Coccidiosis

Caused by a protozoan parasite living in the wall of the intestine of mainly pigeons, budgies and finches. In most cases it is found in small numbers but it will proliferate rapidly under warm wet conditions, lowered immunity, stress (overtraining in pigeons), poor management and nutrition.

Clinical signs

In mild cases no symptoms are seen. Diagnosis is made by doing a faecal floatation test. In more severe cases a dark green to bloody and smelly diarrhoea is seen. Later the birds show weight loss, poor appetite, fluffed-up appearance and death.



Coccidia egg
surrounded by budding Candida cells



Single Coccidia egg.

Photos courtesy of Dr.Colin Walker and Dr.Rob Conradie

Treatment

In the past small numbers of oocysts (eggs) in faecal test were not considered a problem. Now, especially in racing pigeons, we have found that it is necessary to treat, regardless of the numbers of eggs found. Even small numbers of the parasite can cause damage to the intestinal wall. This enables bacteria and viruses to gain easy access to the blood stream.

Medicox and **Coximed** are most commonly used. **Ronamp**, **Avisol**, **Embazin**, **4 in 1**, **Trimethoprim/Sulfa** can also be used.

For pigeons, **Factor 5** and **Tri-Cure** can also be used.

Canker / crop canker (*Trichomoniasis*)

This is a common disease caused by a motile protozoan organism called *Trichomonas columbae* (in pigeons)

Transmission

Transmission through the saliva, is by direct contact by two adults “beaking” or between parents and youngsters being fed, or by indirect contact via water and food.

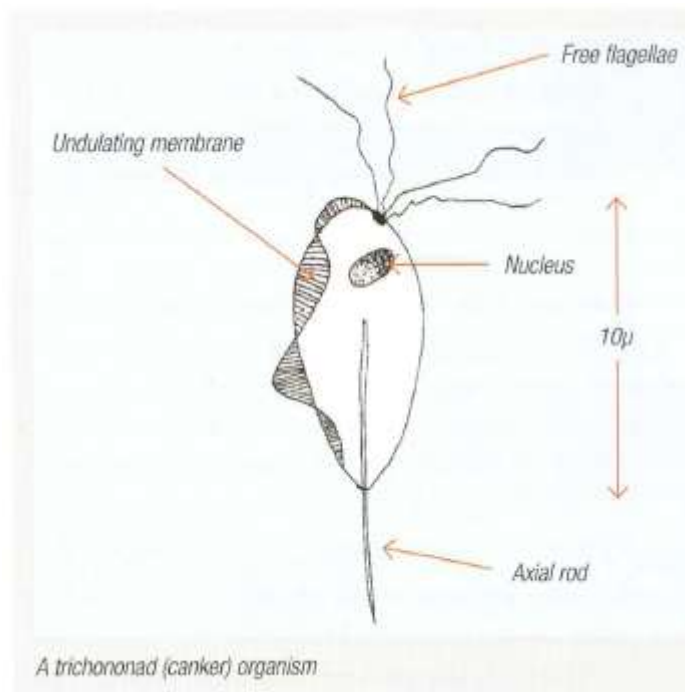
Symptoms

Variable symptoms are seen. They include:-

- Poor performance in racing pigeons.
- Yellow cheesy “growths” in the mouth. Excessive salivation and possibly slime in the throat.
- Difficulty in swallowing. Slow emptying of crop (“slow crop”).
- Poor appetite leading to weight loss.
- Abscesses of sinuses, navel (from infected crop milk spilling onto nest material) and cloaca. Post mortem sometimes shows abscesses in many internal organs.
- Death especially in younger birds.

Diagnosis is easily made by taking a crop scraping or crop flush. The motile organisms are easily seen. See photos and drawing courtesy of Dr. Colin Walker.







Canker organisms (*Trichomonads*) magnified x4000. It is their motility as well as their size and shape that enable quick identification.

Treatment

Many products are available. These are Meditrich, Canker Tonic, Medizole, Ronamp, Canker Combo, Emtryl, Cankerex-Plus, 4 in 1, and for pigeons Tri-Cure and Factor 5.

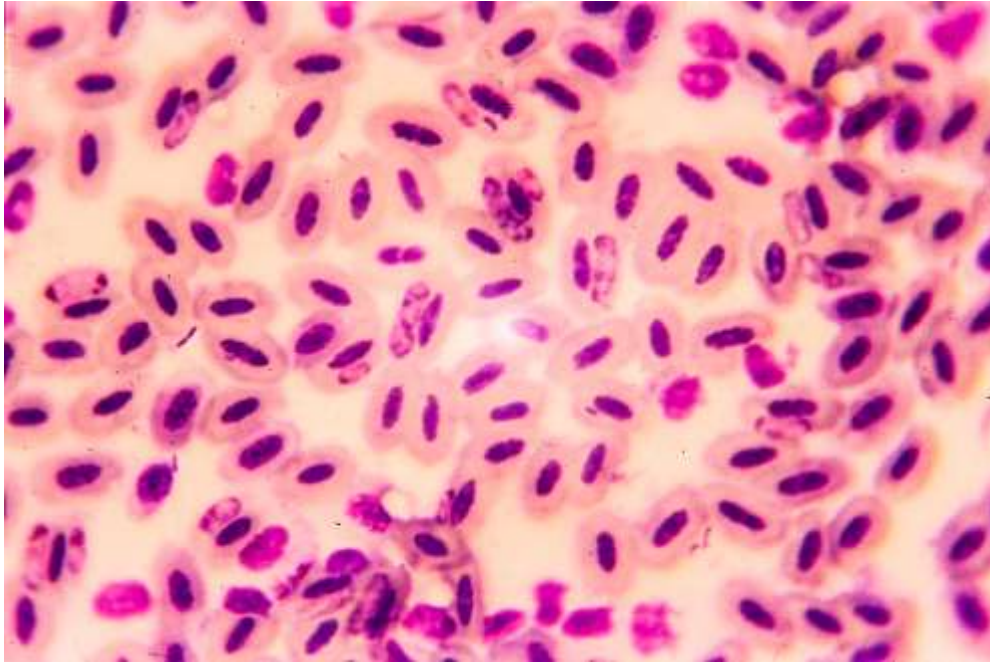
***Haemoproteus* / Pigeon Malaria / Pseudomalaria**

This is a protozoal disease of pigeons caused by *Haemoproteus columbae*, a parasite carried by the pigeon fly (*Pseudolynchia canariensis*) and to a lesser extent mosquitoes/midges.

Life cycle

The parasite present in the salivary glands of the pigeon fly is transmitted to pigeons when it feeds on the bird. These parasites after completing part of their life cycle in the walls of the blood vessels of mainly the lungs and liver eventually arrive in the blood stream. This stage of the life cycle (*gametocytes*) is seen on blood smears (see photo, courtesy Dr Rob Conradie).

The parasites are seen as crescent shaped organisms lying on one side of the nucleus of the red blood cell. Some red blood cells have two parasites in them.



While feeding on the pigeon, the fly will take in these parasites which then multiply in the fly thus completing the life cycle which takes about 30 days.

Clinical signs

Most pigeons show no symptoms apart from a drop in performance during the racing season. In severe infestations anaemia, lethargy and exercise intolerance will be seen. Diagnosis can only be made by examination of blood smears to detect the presence of parasite.

Treatment

The life cycle takes 30 days; for this reason the treatment has to be given over a long period of time.

The most widely accepted treatment regime is 10 days of **Primaquin** at 1ml per litre before the race season and 1-2 days of treatment with Primaquin at 2mls per litre once weekly preferably throughout the year.

The vector/carrier (the pigeon fly) obviously has to be controlled as well. All birds in the loft especially new introductions and strays must be sprayed regularly with **Avian Insect Liquidator** (AIL).

Air Sac Mites

Each bird has nine principal air sacs with several *diverticula* within its respiratory tract. They are not connected to each other. The air sacs communicate with the bronchus and with several air-filled bones such as the femur and humerus. The porous nature of these bones aids the bird's flight. The habitat of the mites is in these air sacs.

Clinical Signs

Some birds can be infected by the mites and appear healthy. The nature of the symptoms depends on several factors: volume of mites and degree of inflammation, not only in the air sacs but also in the lungs, bronchus and trachea. A clinical sign of air sac mites is open mouth breathing, which has a characteristic clicking sound. In a heavy infection some birds can be observed gasping for air. Other signs include coughing, nasal discharge, and tail bobbing, weakness and weight loss. As far as it is known, the complete life cycle of the Air Sac Mite is approximately fourteen to twenty- one days.

Treatment

Scatt is a product that was developed for birds in Australia by Vetafarm... The active ingredient is Moxidectin. This drug kills the mite by interfering with the transmission of nerve impulses in the mite causing its paralysis and death. Birds, like mammals do not have the same nerve transmission system as mites so the drug is harmless to them. The manufacturer recommends for best results, re-treatment should be carried out 3 to 4 times per year.

Scaly Face Mite

The scaly face mite (*Knemidokoptes pilae*) is found primarily in Parakeets (Budgerigars), though it can turn up in canaries and finches as well. The mite is found on the corner of the beak on side, the vent and the legs, and can be diagnosed by identifying the clinical sign of their presence on the bird. This mite burrows in the skin, causing a powdery appearance. If you look closely, you will see a honey-comb pattern of holes in the skin, representing burrows and tunnels caused by the mites.

Treatment

Use **SCATT** the same for scaly face mites as you would for air sac mites. Apply 1 to 2 drops depending on the size of the bird (1 drop per 30g body weight), to the bare skin between the shoulders. You may need to re-treat in three weeks as the mites, which live in the "DEAD" beak or leg scales, do burrow down to feed on the blood. It is very difficult to get the SCATT down into the infected areas. This medication works from the inside out. Re-treat every three weeks until infected beak grows out. Treatment may take up to 6 weeks.

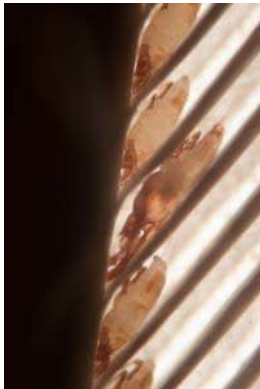
Lice, Pigeon flies, and mites (Ecto-parasites)

Lice and flies especially are commonly seen.

All cause extreme irritation to the birds resulting in stamping of feet, feather picking and in racing pigeons a loss of race form.

Pigeon flies (jockeys), are responsible for the transmission of pigeon malaria (*Haemoproteus* - see section above on this disease). In severe infestations the flies can result in anaemia. Interestingly, they can also transmit lice from one pigeon to another.

Two species of mites are shown in the photos. The top photo shows the effect of scaly leg mite (courtesy of Dr. Colin Walker). Second photo shows quill mite (courtesy of Dr. Rob Conradie).



Treatment

The treatment of choice for lice and flies on the birds is **Avian Insect Liquidator**. It is extremely safe and can be used in all species of birds. It works by killing the adults as well as preventing the eggs and larvae from developing.

For Quill and Scaley leg mite **Scatt** and **Moxyvet**, are very effective.

Worms / Internal parasites

/ *Helminthiasis*

This group consists of Roundworm (*Ascaridia*), Hairworm (*Capilaria*) and Tapeworm.

Transmission

Round and hairworm are transmitted by birds eating or pecking at infected faeces on cage surfaces, food and water. Tapeworms are carried by weevils found in food and other insects. The bird has to eat these intermediate hosts to become infected.

Symptoms

In very mild cases mainly asymptomatic but in severe cases marked weight loss despite a normal or increased appetite.

As round and hairworm are very seldom seen in the faeces diagnosis is made by microscopic examination of faecal floatation. The eggs are shown as in photo courtesy of Dr. Rob Conradie. Tapeworm segments can be seen with the naked eye.



Photo shows Roundworm egg (above) and Hairworm egg(below)

Treatment and control

Mediworm tablets or powder can be used in most bird species. It can be used during breeding and the moult.

It is important to flame the cages/loft at time of treatment so that the worm eggs can also be destroyed. They will otherwise re-infect the birds. Remember that the area in front of the loft can also be contaminated. Unless paved, the worm eggs in the ground or grass can live for a long time. In these cases deworming has to be done on a regular basis. **Factor 5** and **Tri-Cure** can also be used.

Respiratory tract infections

Very common in racing pigeons. Often referred to as “slime in the throat”.

Caused by Mycoplasma or bacteria:-

1. *Mycoplasma*, seen in canaries and Gouldians as well as pigeons. In pigeons it is often seen in association with *Ornithosis* (called Ornithosis)

complex). *Mycoplasma* is a genus of bacteria that lacks a cell wall, and hence is not affected by typical antibiotics. *Mycoplasmosis* is one of the primary causes of upper-respiratory disease in pigeons, canaries and Ghoulians. *Mycoplasma* may also be transmitted via the egg and cause infertility or early death of chicks in the egg or in the nest.

2. Bacteria. Found commonly. The most common bacteria isolated are *Pasteurella* (now called *Gallibacterium*) *Staphylococcus*, *Streptococcus*, *Pseudomonas*, *E.coli* and many others.

Clinical signs ... variable but include:-

- Poor performance
- Open mouth breathing
- Dirty (discoloured) wattles
- Nasal discharge
- Sneezing
- Mucous in back of throat often causing a “string” between tongue and palate (see picture below, courtesy Dr Colin Walker).
- Swollen wide open tracheal opening, with inflamed soft palate and tonsils.
- **Swelling of the lower eyelid**, sometimes with a unilateral or bilateral discharge from the eye ("one eyed cold").
- **Rubbing eyes on shoulder (wing butt)** leaving, in some cases, a dried exudate.

These last two symptoms are most commonly seen with *Pelisteria* infections, especially the lower eyelid involvement.



Treatment

Where possible throat swabs should be taken and a culture and sensitivity test done to determine what is causing the problem and what the best treatment would be. Where testing is not possible:

- For *Mycoplasma* and mixed bacterial and mycoplasma infections: use **Longstim**, **Tylobiotic**, or **Tylodox**.
- For a bacterial infections: Where we have done lab tests, Avivet has been the treatment recommended for most of the bacteria encountered. Other antibiotics that can be used are **Mediprim**, **Trimethoprim/sulfa powder**, **Doxybiotic-Plus**, **Longstim**, **Tylobiotic** or **Tylodox**.
- For *Ornithosis*: Doxybiotic-Plus or **Tylodox** (for complex) is used.

Please check safety before using the recommended product in other bird species.

Pigeon Pox

Pigeon pox is caused by a virus belonging to the poxvirus group, a group of viruses that cause disease in many species. The avipoxvirus subgroup includes a number of closely related viruses such as fowl pox, pigeon pox and canary pox.

There are two clinical forms of pigeon pox, probably associated with different sources of infection. The most common method of transmission results from mosquito bites. Obviously, the resultant lesions will appear on featherless areas of the body, e.g. on the eyelids, around the beak (*see pictures below courtesy of Dr Rob Conradie*) and occasionally elsewhere on the body. The lesions start as small papules and gradually progress to a wart-like thick dark scab. Eventually the scabs will fall off and complete healing generally takes place within four weeks of infection. This form of the disease is seldom life threatening and is often more of a nuisance in racing pigeons as it results in a break in the training program.



The second form of pigeon pox is probably due to droplet (aerosol) infection and involves the mucous membranes of the mouth, pharynx, larynx and trachea. This is often referred to as the wet form of pigeon pox as the lesions on the mucous membranes are soft and cheesy in nature. This is a far more serious form of the disease. Affected pigeons appear very sick, stop eating, have difficulty in breathing and generally lose a lot of weight. Mortality mostly results from asphyxiation due to blockage of the respiratory tract by the necrotic material or else from secondary bacterial infections with the formation of toxins.

Occasionally a mixed form may occur with cutaneous scabs as well as soft lesions in the respiratory or even the intestinal tract. This mixed form is more common in racing pigeons and may be due to the presence of predisposing conditions. The crowding of racing pigeons in baskets often leads to fighting with resultant skin lesions, which will allow entry of virus. The very close contact between such pigeons will also facilitate contact transmission resulting in the cutaneous as well as the mucosal form.

Vaccination, in most instances, amounts to controlled exposure of pigeons to field strains of the virus by applying the virus to a part of the body where least damage would result. Squabs five weeks or older should be immunised. The directions for use described in the package insert that accompanies the vaccine should be carefully followed. There are basically two methods of vaccine application. In the one (scratch method) a hypodermic needle (supplied in the package) is dipped into the vaccine and one or two scratches made in the skin of the breast. This method requires some skill – if the scratch is too superficial, the virus will not “take” and no local lesion will develop. Should the scratch be too deep and a fair amount of blood exudes from the wound, the vaccine is flushed out, with no resultant “take”. In the absence of a local lesion there is no certainty that the pigeon will develop immunity. This method is very popular with most pigeon fanciers but the immunity following vaccination is often variable as a result of the variable percentage of “takes”.

The most effective method is the so-called “follicle method”. About five feathers are plucked out on the lower leg and vaccine applied by means of a brush that has been dipped into the vaccine. Follicular lesions develop within 7-10 days and although the lesions may look unsightly for a few days, they disappear completely after 2-3 weeks. The general health of such vaccinated pigeons is not affected but the resultant immunity is of high quality and good duration.

Taking into consideration the superior efficacy of the “follicle method”, MEDPET strongly recommends that Medipox be administered by this route rather than through the “scratch method”. (Despite the fact that many pigeon fanciers achieved acceptable levels of immunity through the “scratch method” in the past.)

It is currently accepted in the scientific community that different isolates (or “strains”) of the pigeon pox virus may exist. Although these “strains” may vary with respect to their potential to cause disease in pigeons, it seems that these “strains” are very similar from an immunological perspective. This implies that illegally-imported pigeon pox vaccines hold no advantage over the commercially-available and locally-registered pigeon pox vaccines. In fact, exotic vaccines illegally-imported from outside the South African borders carry the risk of introducing new strains of the virus into the country which may aggravate the disease.

Treatment :

Vaccinate with **Medpet’s Medipox**, and even though you may have used the scratch method successfully in the past, be aware that things have changed with this virus in the last few years and you are strongly recommended to use the follicle method.

Specifically, avoid using pox treatments that have been brought in from foreign

countries as this creates more problems than it solves.

Paramyxo

A common viral infection of pigeons caused by a Paramyxo virus, another strain of which causes Newcastle disease in poultry

Transmission

The virus is spread throughout the loft via water, food, loft surfaces and the air (aerosol).

It can spread very rapidly causing the symptoms described below within 2 -6 days after contact.

Symptoms

The disease can take on three different forms or combinations of these.

- Nervous symptoms with typical head twisting, star gazing and tremors. Photos courtesy of Dr Colin Walker show these typical symptoms (with wet droppings typically associated with Paramyxovirus infection; and abnormal stance & head position adopted when the virus infects the bird's brain. If it were to affect the nerves (which is also nerve/ brain tissue), lameness in wings and legs can be seen.
- When the kidneys are affected, the birds drink a lot of water resulting in watery faeces. The typical picture seen would be the solid parts of the faeces forming a small "worm" in the centre surrounded by what looks like pure water.
- When the intestine is affected, diarrhoea is seen.
- Death can occur within a few days.





Treatment

Being a virus there is no specific treatment.

Liquorice powder that has been recently introduced by us was tested in Poland. Researchers found noticeable response to treatment keeping in mind that no treatment would be 100% effective.

Supportive immune stimulatory treatments that can be used include **Entero-Plus, Intestum, Viroban and Medimune.**

Vitaton 34 is supportive and **Medilyte**, is used to combat the effects of dehydration.

Nobilis Paramyxo is often used as a form of treatment

Prevention

Nobilis Paramyxo vaccine is very effective in the prevention of this disease.

It is best given to youngsters at 3 weeks of age and again 4 weeks later.

Before the race season it is again given to these youngsters and all the older race birds and stock birds. It is repeated annually.

Young Bird Disease /Syndrome

Called a syndrome more than a specific disease because it is caused by a number of viruses with *Circo* and *Rota* virus playing the major role. The other viruses found are *Adeno*, *Herpes* and *Paramyxo*.

This short article refers to the viruses causing YBD but at present any bird that becomes ill, for whatever reason is given a diagnosis of YBD.

Transmission:

The virus spreads rapidly by direct and indirect (through water, air, excretions and food) contact.

Clinical signs:

Typically seen at 4 to 12 weeks, often with a second wave of a milder infection when

training and racing starts when they are about 6-10 months old. Symptoms can be variable depending on virus and secondary infections involved. They include:-

- Very poor appetite.
 - Delayed emptying of crop often noticed first by the fancier.
 - Vomiting.
 - Diarrhoea.
 - Drinking lots of water.
 - Rapid weight loss. What we also see is that a bird returns from a race having lost far more weight than you would expect it to lose from that flight duration/distance.
 - Death in some cases depending on the virus we are dealing with. Mortality can be as high as 80%.
 - If *Paramyxo* is involved nervous symptoms (twisting of neck) and very watery faeces are seen.
- Destruction of the immune system especially by *Circo* virus leads to inadequate response to vaccinations and susceptibility to secondary infections. Poor returns from training tosses and races even in birds that to the fancier appear normal. This is associated with second wave of infection mentioned earlier.

Treatment and prevention

- There is no freely available vaccine against the viruses except for *Paramyxo*.
- Rest the birds for as long as possible.
- Isolate sick birds.
- Boost immunity with **Medimune** powder and tablets, **Entero-Plus**, **Intestum**, **Viroban**, and **Medibrew**.
- Liquorice powder can be used as a form of treatment as it is used with *Paramyxo*.
- Correct dehydration with **Medilyte**.
- Treat secondary infections....
- For bacteria use **Mediprim**, **Avivet** or **4 in 1**
- Canker if present must be treated with **Meditrich**, **Canker Tonic**, **Emtryl**, **Canker Combo**, **Ronamp** or **Canker ex-Plus**
- *Candida* is very often a secondary problem. Treat with **Medistatin**
- Vaccinate against *Paramyxo* with **Nobilis Paramyxo**. The latest recommendations are 1st vaccination at 3 weeks and 2nd one 4 weeks later. The earlier vaccination is advised to allow babies to develop an immunity to *Paramyxo* before *Circo* virus becomes a problem. Once they have *Circo* virus they are unable to develop sufficient immunity.

Vitamin, mineral, amino acid and protein supplements

Medpet has a variety of products that can assist with mineral & vitamin deficiencies.

Aminostress

A vitamin, mineral and electrolyte additive used after strenuous exercise in racing pigeons.

Aminovit H

Added to the food to supply amino acids, vitamins, minerals and trace elements

Bloedstim

A vitamin, mineral, trace element and iron supplement.

Calcibird

A Calcium. Vit. D3 and Magnesium supplement used 2-3 times weekly, mainly during the breeding season.

Lewerstim

Liver protectant and detoxifier.

Plume-Plus

Used twice weekly. The essential fatty acids promote optimal plumage health.

Premolt 5 and 100

For optimal feather health especially useful during the moulting season
Also indicated for feather plucking and calcium deficiency in parrots fed only seed diets.

Protein Boost

A high protein supplement for pigeons.

Vitaton 34

A very popular affordable combination of vitamins, minerals and trace elements. Can be used anytime of the year.