

Lester Louis L. Lopez  
c/o Vets in Practice  
63 Maysilo Circle,  
Plainview, Mandaluyong City, Philippines

## **INTRODUCTION**

Avian medicine remains an emerging discipline for Philippine veterinarians, due possibly to a fear of handling birds, a lack of interest, or the low economic significance of birds. Among those veterinarians practising avian medicine, the diagnosis and treatment of bird diseases is on a par with that in more developed countries, despite a lack of proper equipment.

Among Philippine veterinarians, those practising avian medicine are also in small animal medicine and concerned with conservation. In this report, discussions will be on clinically and -based cases among common pet birds, exotic birds, exotic pets and raptors in animal rescue centres in the Philippines.

## **THE CLINIC SETTING**

The most common bird species kept as pets in the Philippines are several species of macaw, the umbrella cockatoo (*Cacatua alba*), sulphur-crested cockatoo (*Cacatua galerita*), African gray parrot (*Psittacus erithacus*), several species of lory, Eclectus Parrot (*Eclectus roratus*), parakeets, cockatiels (*Nymphicus hollandicus*), African lovebirds (*Agapornis* spp) and budgerigars (*Melopsittacus undulatus*).

Among the patients presented at the Vets in Practice Animal Hospital, the usual clinical signs presented are poor feathering and presence of skin lesions, inappetence, decreased activity and difficult or laboured breathing. Tests for diagnosis would include parasite isolation (feather microscopy or faecal analysis), haematology (using animal-specific blood test machine, i.e. VetScan®) and radiography.

These tests would usually yield the following:

- Endoparasitism - the treatment of choice is fenbendazole, metronidazole and multivitamins;
- Ectoparasitism - the treatment of choice is fipronil and multivitamins;
- Hepatic insufficiency – liver tonics (naturally-sourced liver enzyme supplements - Liv52®, Liverolin® or Liver Tone®), laxative (Lactulose, using the hepatoencephalopathy dose), multivitamins and dietary changes
- Renal Insufficiency – kidney tonics (naturally-sourced kidney supplements like Nefrotec®), a diuretic, multivitamins and dietary changes
- Metabolic insufficiency – multivitamins and dietary changes
- Respiratory conditions – due to lack of proper diagnostic tool, patients are treated symptomatically using antibiotics (that includes doxycycline or enrofloxacin), nebulisation and multivitamins.
- Trauma – depending on the location – the eye is treated with hyaluronic acid and

tobramycin if cornea is ulcerated, or the latter if only infected; bandaging, bone pinning or bone plating with antibiotic therapy when fracture or dislocation is involved; severe wound or skin lesions treated with antibiotic, Solcoseryl® and then dressed.

## **THE FIELD SETTING: ANIMAL RESCUE CENTRES**

Aside from the birds listed above, raptors such as the Philippine eagle (*Pithecophaga jefferyi*), changeable hawk eagle (*Nisaetus cirrhatus*), serpent eagle (*Spilornis cheela*), Philippine eagle owl (*Bubo philippensis*), Eastern Grass Owl (*Tyto longimembris*), brahminy kite (*Haliastur indus*) and the white-breasted sea eagle (*Haliaeetus leucogaster*), are mostly treated.

In rescue centres, birds are rehabilitated and, if possible, either released or distributed to zoos. Disease conditions are also encountered, among which are ulcerative pododermatitis, salmonellosis, avian pox, candidiasis, aspergillosis, ecto- and endo- parasitism and trauma. Overgrown beaks and talons are commonly presented.

The following cases will be discussed:

### **Foot Replacement in a Philippine Hawk Eagle (*Sphizeus philippinensis*)**

A rescued Philippine Hawk Eagle from the Wildlife In Need Rescue Center in Subic, Zambales, had its left leg amputated, due to severe gangrene from a nylon trap. The leg was replaced with a titanium steel material that allowed it to balance and move normally on a flat surface. A combination of medical and dental technology was utilised. Two of the original options planned for the stable implantation were sleeving of the metatarsal bone or bone screw implantation.

### **External Fixation in a Grass Owl**

A Grass Owl, unable to move normally, was rescued by the Laguna Wildlife Park and Rescue Center in Pansol, Laguna, from an individual who was incorrectly feeding the bird, resulting in metabolic bone disease. A radiograph showed a fractured tibia and fibula of both legs. An external fixation using pins was used to stabilise the fractures. The pins and thermoplastic material were used to align the fractured bones of both femurs.

### **Beak Replacement in a Hornbill**

A male 8-year old Mindanao Rufus Hornbill (*Buceros hydrocorax*) had a broken lower beak and was presented to the Laguna Wildlife Park and Rescue Center. The bird had been assisted by its owner. A prosthesis was made to repair the beak. An impression of the fractured end of the lower mandible and the intact upper beak was made using rubber impression material. Cement was used on the cast to obtain a cast that gave proper alignment for occlusion. Dental acrylic was used to reconstruct the lower beak. An overlap was designed to go over the lateral and medial sides of the damaged mandible to allow for insertion of the size 1 titanium screws. Two screws on each side were drilled to the horn-like structure of the beak and supported with cerclage wires for stability. When the prosthesis was screwed in a permanent position, the beak was fixed in place to ensure a properly aligned upper and lower beak closure. The beak consisted of the raw transparent material and was not coloured.

After attachment of the prosthetic the bird was able to use his bill for picking up food and grooming.

Two years later it was noticed that prosthetic beak was unstable, and a new prosthetic with a natural beak colour was manufactured.

### **Reconstruction of a Deformed Upper Beak of a Black Palm Cockatoo (*Artherimus artherimus*)**

A black palm cockatoo was afflicted with fungal infection of the upper beak, resulting in erosion of the right side. Fungal culture of a sample from the site yielded *Aspergillus* spp. The site was cleaned with the use of a hand drill, and the area treated with topical ketoconazole cream and washes with betadine cleanser 7.5 % q24h for 3 weeks. At this time, the site was excavated to give an undercut to provide an effective hold for the filling material. An impression of the upper beak was taken with dental rubber impression material, and from this a mould was prepared to make a prosthesis to cover the damaged portion of the beak. Black ink was added to the mould to give a colour that blended with the rest of the beak. The bird was examined three times, every two weeks and then once a month for five months. After two years the acrylic filling was extruded and the beak was back to its normal shape.

### **AVIAN MEDICINE PRACTITIONERS IN PHILIPPINE WILDLIFE CONSERVATION**

Illegal wildlife trade is active in the Philippines and the confiscation of endangered endemic or exotic and foreign birds is very common. Thus these birds are commonly seen in clinics as pet birds and in Rescue Centres as confiscated items.

The limited number of veterinarians in avian practice also involve themselves in the conservation of Philippine wildlife. Many of these vets, members of the Philippine Association of Wildlife Veterinarians (PAWVI, recently formed in 2005), are also involved with establishments such as Environmental Department's Wildlife Rescue Centers, Laguna Wildlife Park and Rescue Center, MyZoo Volunteer Group Foundation, Wildlife In Need Rescue Center, Ailon Zoological Park, Negros Forests and Ecological Foundation, and the Philippine Eagle Foundation. These establishments support the breeding of endangered Philippine species and the protection of habitats where rescued endemic or indigenous animals can be released.

### **CONCLUSIONS**

Points made about the diagnosis, treatment and recovery of an avian patient:

- Weights are more important than measurements INITIALLY.
- A photograph upon arrival, and subsequently after that, is very useful for monitoring of disease development.
- With or without baseline data, haematology and biochemistry are useful.
- Whenever possible, obtain a radiograph.
- Isoflurane anaesthesia works well.
- Be cautious with prophylactic antibiotics.
- Always be ready to do a necropsy.

Finally, what works best for an avian veterinarian, whether in the Philippines or elsewhere, is the satisfaction in curing a disease condition that afflicts our patient.