

# CASE STUDY

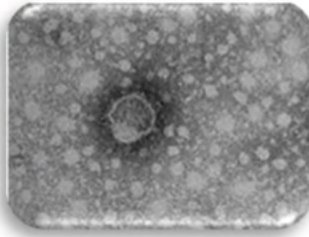
## Avian Bornavirus in Parrots

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# Case Study : Avian Bornavirus in Parrots



Avian Bornavirus in TEM view

Avian Bornavirus (ABV) is common RNA viral disease in parrots, and the feature is high infection rate, low incidence and high mortality rate. Once obvious symptoms appear, parrots may have Proventricular Dilation Disease (PDD) that is a disease that can affect the nervous system of parrot. PDD has been document-

ed in more than 50 species of psittacine birds encompassing all major groups of parrots.

In clinical cases, as more parrots have been tested with blood, it has become clear that many healthy parrots harbor the virus. While some of these parrots may go on to develop typical signs of PDD, many will remain healthy for years. However, death eventually comes from severe malnutrition after parrots suffer from PPD. As the proventriculus distends, normal digestion and motility are lost and the bird begins to waste away as they have difficulty absorbing the nutrients in their diet.



## ◆ Symptoms

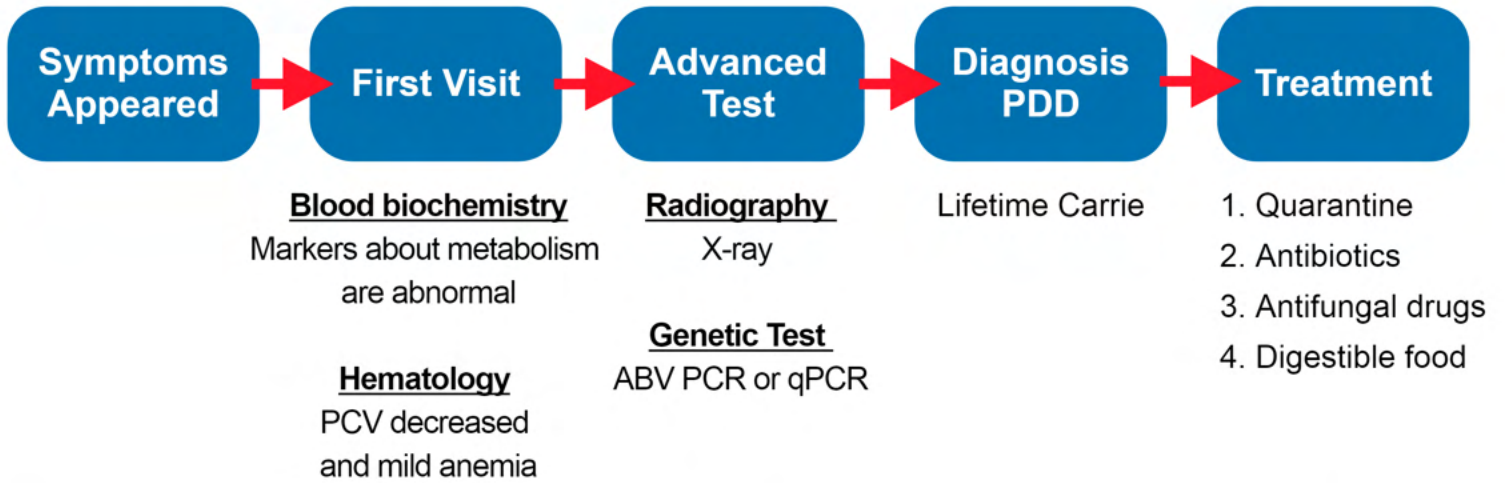
1. Dilated and flaccid proventriculus: regurgitation, weight loss and undigested food in the droppings (seeds and nuts)
2. Nerves are affected: depression, anorexia, seizures and trouble with balance, walking or flying

## ◆ Transmission

1. Fecal-oral infection
2. Vertical transmission
3. Non-zoonoses



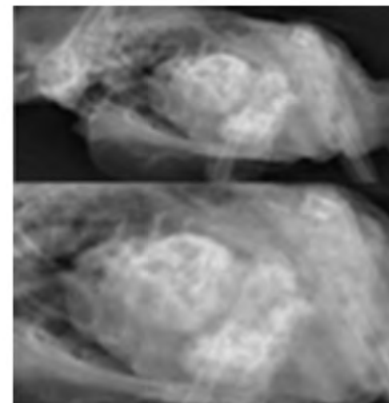
◆ **Diagnostic Process**



▼ Fig 1.

|          |   |      |              |        |  |  |  |
|----------|---|------|--------------|--------|--|--|--|
| GLU      | H | 500  | (232 - 369)  | mg/dL  |  |  |  |
| TP       |   | 4.3  | (2.1 - 6)    | g/dL   |  |  |  |
| ALB      |   | 4.8  | (1.3 - 5.3)  | g/dL   |  |  |  |
| AST      | H | 1500 | (45 - 123)   | U/L    |  |  |  |
| AMYL     | H | 2107 | (384 - 994)  | U/L    |  |  |  |
| PHOS     | H | 14.4 | (1.8 - 4.1)  | mg/dL  |  |  |  |
| GLOB     | - | ND   | (0.4 - 2.1)  | g/dL   |  |  |  |
| ALB/GLOB | - | ND   | -            |        |  |  |  |
| CHOL     | H | 97   | (53 - 83)    | mg/dL  |  |  |  |
| CK       |   | 309  | (110 - 480)  | U/L    |  |  |  |
| LDH      | H | 317  | (30 - 205)   | U/L    |  |  |  |
| CA       | H | 22.1 | (7.6 - 10.4) | mg/dL  |  |  |  |
| UA       | H | 28.8 | (2.5 - 12.9) | mg/dL  |  |  |  |
| GGT      | H | 1411 | (0 - 3)      | U/L    |  |  |  |
| TBA      | L | 4    | (22 - 60)    | μmol/L |  |  |  |

▼ Fig 2.



▼ Fig 3.

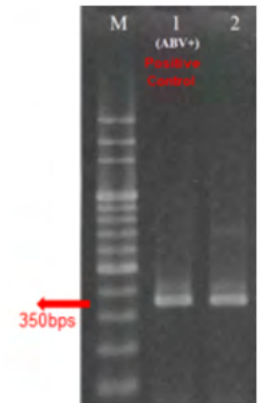


Fig 1. Tested by AmiShield with Avian/ Reptile Profile Panel

Fig 2. Dilated proventriculus photographed by X-ray

Fig 3. ABV gene expressed by PCR in parrots suffered from PDD

◆ **Reference**

1. The study cooperated with AmiShield and Hung-Yi Wu, professor from Department of Veterinary Medicine, National Pingtung University of Science and Technology.
2. Rossi G, Dahlhausen RD, Galosi L, Orosz SE. Avian Ganglioneuritis in Clinical Practice. Vet Clin North Am Exot Anim Pract. 2018 Jan; 21(1): 33-67.