

Update on

Chlamydophila psittaci

A Short Comment

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Fig 27.1 | A bird infected with *C. psittaci* organism may not have clinical signs. This condition can occur in small birds such as this blue budgerigar.



Fig 27.2 | This lutino cockatiel has the upper respiratory signs associated with avian chlamydiosis. The bird tested positive for the disease. Additional therapies may be needed to treat secondary infections that arise as a result of the primary disease.

Chlamydophila psittaci is a zoonotic intracellular bacterial organism that causes the diseases psittacosis in humans and avian chlamydiosis in avian species. Clinical signs often associated with a psittacosis (human) infection include generalized “flu-like” symptoms to more severe pneumonia and complicating health issues. Avian chlamydiosis will present as non-specific clinical signs in a companion bird patient (Fig 27.1). These non-specific signs can include ocular, nasal or conjunctival irritation and discharge, anorexia, depression, dehydration, bright green urates and diarrhea (Fig 27.2). Many avian species have been diagnosed with *C. psittaci*, but it is the companion bird species where this disease is the greatest public health concern.

It is often difficult to confirm a diagnosis of avian chlamydiosis because of the intracellular life cycle of the organism, prophylactic treatment of patients with appropriate antibiotics but using inappropriate doses and treatment periods, and the periodic shedding of elementary bodies (the infectious form of the disease). The difficulty to confirm avian chlamydiosis cases encourages the veterinarian to use multiple testing methodologies. Testing methods that can be used either individually or preferably in combination include pathology, antibody testing (direct complement fixation and elementary-body agglutination) and antigen testing (enzyme-linked immunosorbent assay, immunofluorescent antibody tests, polymerase chain reaction amplification technology on choanal/cloacal swabs and blood). Prior to sample submission, the diagnostic laboratory should be contacted for recommendations on proper sample collection, labeling, packaging

and shipment of the sample material. A breakdown in sample handling or shipment delay can adversely affect the reliability of *C. psittaci* test results.

There are several treatment options available to treat suspected or confirmed avian chlamydiosis cases. The treatment options are based on doxycycline as the drug of choice and being administered in the most appropriate way for the patient(s) to receive a therapeutically effective dose for the duration of the 45-day treatment regimen. There have been recent advances in using doxycycline hyclate powder from opened capsules as a seed coating for budgerigars or mixing the powder in water for larger birds.¹ Oral doxycycline (monohydrate or calcium) or intramuscular injections of specific formulations^a can be effective treating the individual bird or group of birds that will tolerate the stress of capture and drug administration on a regular basis.

Chlamydoiphila psittaci is a public health concern and can be a deadly, expensive disease within an aviary or to the individual companion bird. Although difficult to diagnose, avian chlamydiosis can be diagnosed and treated if there is an understanding of the available tests,

and the proper tests are used to confirm the presence of the disease. Early communication to a client about the ability of this organism to resist improper treatment and the consequences of discontinuing treatment will often lead to owner compliance with antibiotic administration. In hopes of protecting birds and bird owners in the future, research is currently being conducted to improve *C. psittaci* diagnostic testing and to develop a vaccine to protect birds from infection if exposed to the infectious elementary bodies.

See Chapter 1, Clinical Practice for location the compendium of psittacosis control from the CDC. See Chapter 21 Preventative Medicine and Screening for a review of diagnosis and preventive measures.

Product Mentioned in the Text

a. Vibrovenos formulation, Pfizer Laboratories, London

References

1. Smith KA, Eidson M, Johnston WB, et al. Compendium of measures to control *Chlamydoiphila psittaci* (formerly *Chlamydia psittaci*) infection among humans (psittacosis) and pet birds, 2002. *Compend Contin Educ Pract Vet* 24:328-335, 374-378, 2002.
2. TullyTN: Update on *Chlamydoiphila psittaci*, *Seminars in Avian and Exotic Pet Medicine*, vol 10, No 1 (January) 2001, pp 20-24.