

Avian Chlamydiosis (*Chlamydophila psittaci*)

A PowerPage Presented By



Chlamydophila psittaci, also known as *Chlamydia psittaci*, **Avian Chlamydiosis (AC)**, **Psittacosis**, **Parrot Fever**, and **Ornithosis**, is one of the most common bacterial diseases of companion birds. It is **highly contagious** and **zoonotic**. For those reasons, even though avian questions make up only a small percentage of all boards questions, this disease commonly appears. The goal of this PowerPage is to review the important features of this disease.

Pathogenesis and Epidemiology

- Bacteria is shed in feces and respiratory discharges
 - There are eight known serovars; all should be considered potentially pathogenic and zoonotic
 - *C. psittaci* can remain infectious for weeks to months in environment
 - Ingestion or inhalation is primary route of infection
 - There are reports in the literature of transmission via eggs and feather dust
- Latent carriers are common and are difficult to identify
 - Bacteria may be shed under stressful conditions (shipments, concurrent disease, inadequate housing, etc)
- Incubation period is 5-14 days (in animals and man)
- Since this is an **obligate intracellular** organism, treatment and diagnosis is difficult

Clinical Signs

- In birds the infection is often systemic and can range in severity from being unapparent to severe and may be acute or chronic with intermittent shedding
- Symptoms are variable, from lethargy and weight loss to fulminant disease
- Sick birds may show any or all of these classic signs:
 - **Nasal/ocular discharge**
 - **Infraorbital swelling**
 - Respiratory difficulty
 - Diarrhea and green urates
- In humans:
 - Inhalation is primary route of infection
 - Symptoms range from unapparent illness to severe pneumonia
 - Veterinarians, companion bird owners, poultry farmers, zoo workers and pet shop employees are at increased risk of the infection. Likely an under-diagnosed disease in man

Diagnosis

- Symptoms may be helpful but not pathognomonic
- Minimum data base: elevated white blood cell count; elevated AST, ALT, LDH (indicative of hepatopathy)
- Although numerous diagnostic tests are available, a combination of tests may be needed to confirm diagnosis of AC
 - PCR analysis of blood, feces and/or respiratory fluids
 - Several serologic assays are available; paired samples sometimes needed to detect 2-4 fold change in titer

- Complement fixation (CF), latex agglutination (LA), elementary body agglutination (EBA), immunofluorescence antibody (IFA); each has advantages/disadvantages depending on situation
- **Culture** is the gold standard of testing modalities but is dangerous and only carried out by licensed laboratories
- Post-mortem examination of tissues is diagnostic
- Remember that most states require veterinarians and laboratories to **report** positive cases of *C. psittaci*

Treatment

- Oral or injectable **doxycycline** is the drug of choice for treating avian species
- Treatment generally lasts for 45 days due to the life cycle of this intracellular organism
- Calcium supplements are added to the diet during treatment since tetracyclines can bind this mineral

Prevention

- Use common sense personal and pet hygiene practices
- Test and quarantine newly acquired birds
- Avoid purchasing birds from avian fairs or poorly managed aviaries
- Vaccines are not yet available (subunit vaccine currently under research)

References and Links

<http://www.nasphv.org/Documents/Psittacosis.pdf>

