

## CHLAMYDIOSIS

### Etiology:

Avian chlamydiosis is an infectious disease caused by the intracellular, gram negative bacterium *Chlamydia psittaci*.

The disease is contagious and most often systemic and potentially lethal. Airborne and oro-nasal transmissions are common.

Following inhalation, the initial replication of *Chlamydia* begins in respiratory macrophages, prior to haematogenous spread to several organs including liver, spleen and nervous tissues.



*Elisa Test for Chlamydia*

### Clinical signs:

Acute, subacute and chronic courses of the disease are described. Clinical signs are variable and include respiratory signs (dyspnea, conjunctivitis, oculonasal discharge), anorexia, regurgitation,

vomiting, greenish diarrhea and neurologic symptoms such as tremors or torticollis.

### Diagnosis:

Supportive diagnostic tools may be hematology, blood chemistry, radiology, and endoscopy.

Splenomegaly and hepatomegaly during radiographic or endoscopic examination and high numbers of leucocytes during hematologic examination may be indicative for chlamydiosis.

The molecular biology (PCR) of dry swab or organ samples and the detection of specific circulating antibodies, antigens or both using ELISA technique (enzyme-linked immunosorbent assay) plays an important role in the diagnostic process.

Bacterial isolation and identification of the living organism is difficult as it requires cell culture.

### Treatment:

Treatment of avian chlamydiosis is based on administration of antibiotics with intracellular activity. Tetracyclines such as doxycycline is usually the first choice drug.

Alternatively, enrofloxacin, marbofloxacin or azithromycin have been proposed for the treatment.

Due to intracellular mimicry of the agent treatment needs to be long enough (4-6 weeks) and relapses are possible. Parallel prophylactic antimycotic treatment to prevent the development of aspergillosis may be advisable.

### Prevention:

Quarantine and disinfection (e.g. using bleach) and testing of birds prior to inclusion in the collection is advisable.

## PSEUDOMONIASIS

### Etiology:

*Pseudomonas aeruginosa* is the causative agent of pseudomoniasis. The gram negative bacterium is able to produce extracellular toxins. It may cause disease in psittacines and raptors.



Coanal abscess in baby parrot due to *pseudomonas*  
(same symptoms in falcons)

### Clinical Signs:

Septicemia, diarrhea, dyspnea and sudden death are described besides necrotizing lesions of skin and mucous membranes (rhinitis, glossitis and sinusitis).

In raptors a stomatitis with caseous nodules is most common.

### Diagnosis:

Diagnosis is based on bacterial culture from swabs or organ samples on blood agar. In gram stain *Pseudomonas* spp. are gram negative rods. Biochemical differentiation, PCR protocols and MALDI (matrix-assisted laser desorption/ionization) may be used for bacterial identification following culture.



Performing an endoscopy to see parenchymal organs.

### Treatment:

According to the results of antibiotic sensitivity testing, antibiotics are used over a period of 7 to 14 days. Success of therapy is checked by bacterial culture between 3 and 6 weeks after completion of antibiotic treatment. Parallel prophylactic antimycotic treatment to prevent the development of aspergillosis may be advisable.

## Prevention:

Hygiene measures (especially of the feeding and drinking sites) are recommended.

As waterfowl transmits the bacteria often, removal of waterfowl may be advisable.

Therefore, in some cases vaccination with these strains seemed to prevent or improve clinical pox disease, but in other cases no effect has been observed at all. A flock-specific vaccine may be prepared, using virus that has been isolated from affected birds, to protect other individuals in the same collection.

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**Photo courtesy of:**

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