

Report of the AAV/AAAP Chlamydiosis Committee - June 1983 to June 1984

The rapid, accurate diagnosis of chlamydiosis remains the greatest need of the avian practitioner. Some progress has been made in this area during 1983 and 1984. This consists of the availability of a diagnostic serology service at Texas A & M University provided by Dr. James Grimes. In addition, several commercial diagnostic kits based on a specific immunologic reaction which appear to have promise have appeared on the market.

Chlamydiosis may assume even greater priority with the appearance of product liability litigation cases against pet shops and other outlets selling birds infected with Chlamydia psittaci. Potential malpractice suits from clients acquiring psittacosis from a treated and assumed healthy bird have entered or are about to enter the courts.

With increasing frequency, avian veterinarians are encountering parrots with import station identification infected with chlamydia. The lack of monitoring and enforcement of the feeding of chlortetracycline (CTC) in import stations is a commonly known fact. This is difficult to understand with the National Veterinary Services Laboratories (NVSL) capable of running several methods of antibiotic assay procedures on feed and/or blood. In addition, the technology that would permit monitoring of blood CTC levels of birds on treatment in quarantine stations after shipment to the NVSL is available and has been published. Several members of the committee have been personally informed of the above situation. The information is being transmitted to Dr. David E. Herrick of Veterinary Services, APHIS, USDA.

Committee Activities - June 4, 1983 to June 1984

Follow-up of Meeting at the Fourth AAV Annual Meeting, San Diego, California

During the Chlamydiosis Committee meeting, the first motion passed was a charge to the Committee to formulate a list of questions to be answered in order to define the term "Avian Chlamydiosis" and its zoonotic significance and, in so far as possible, pursue answers to those questions.

A letter to the committee requesting questions for discussion by correspondence to include in the list which we accepted as the charge was mailed June 22, 1983. One answer was received to the fourteen letters mailed. No further action was taken.

During the San Diego meeting, a second motion was passed encouraging the U.S. Department of Agriculture and U.S. Public Health Service to allocate resources for the development of more rapid and accurate chlamydial diagnostic methods and valid bases for interpretation of the results. The Chairman's attempts to communicate this motion to appropriate levels of the agencies met with the recommendation that such communications were most effectively communicated through the resolutions of the appropriate USAHA committee, i.e., Committee on Transmissible Diseases of Poultry.

Meeting of Chlamydiosis Committee in Conjunction with 87th Annual Meeting

of the United States Animal Health Association, Las Vegas, Nevada

October 16-21, 1983

and AAV
Attendance at this meeting was largely by AAAP/members. Great interest was expressed in determining the incidence of disease in cage birds at various levels of commerce, in particular by Dr. I. H. Kahan, who proposed a project

to gather such data in a usable form. Dr. Art Bickford of AAAP discussed the problems facing such an undertaking and mentioned that Dr. George West had several of his graduate students transferring data on the incidence of disease in pet birds to computer records.

One particularly interesting discussion was initiated by Dr. Barbara Daft of the California Department of Agriculture, who pointed out that many specimens from birds clinically diagnosed as positive for chlamydia were negative when examined in the laboratory. The hazard of making a diagnosis based solely on such stains as Macchianella's, Gimenez, and similar procedures was emphasized.

Another topic of discussion was the devastating effect on chlamydia in specimens collected and shipped improperly. The use of ice packs with chlamydial specimens shipped to a laboratory and the use of Brain Heart Infusion Broth or an appropriate transport media were encouraged.

Meeting of the AAV/AAAP Chlamydiosis Committee at the 33rd Western Poultry Disease Conference, Davis, California, February 27-29, 1984

Several interesting presentations on chlamydiosis were given prior to the committee meeting. Dr. J. Tacal, a county veterinarian, gave an interesting paper on the epidemiology of selected cases of psittacosis among pet birds and humans in San Bernardino County, California.

Dr. Murray Fowler presented what is believed to be the first report of an outbreak of chlamydiosis in a raptor rehabilitation center with one human contact case resulting.

Dr. Edmond Bayer discussed several facets of human chlamydiosis in California. The hazards of spreading chlamydiosis by combining infected and

healthy birds in quarantine stations and other facilities such as raptor rehabilitation centers was also emphasized by Dr. Bayer. He mentioned the probability of the raptors becoming infected as a result of their ingesting infected birds killed in their normal hunting activities. He mentioned that the California State Department of Health counted only those avian chlamydiosis cases confirmed by laboratory tests and that this no doubt resulted in misleading data which did not reflect the much higher incidence of avian chlamydiosis. The value in diagnosing chlamydiosis in humans of running IgG and IgM levels along with the complement-fixation test was also discussed by Dr. Bayer. Avian psittacosis cases in California increased from 29 cases in 1975 to 676 cases in 1981, and then from 276 cases in 1982 & about 200 cases in 1983. According to Dr. Bayer, chlamydiosis in avian species in California during 1984 is running about the same as in 1983. One human case of the 33 cases occurring in California in 1983 which terminated fatally was given a parakeet one month earlier. The parakeet was positive for chlamydiosis. A product liability suit has been initiated against the pet shop which sold the bird. Several similar cases were mentioned by several discussants. The probability of malpractice litigation as a result of human cases originating from a "treated" psittacine was also discussed. Additional sources of liability to the practitioner could be for not notifying appropriate government health agencies of a positive case. If it could be shown that a case of human psittacosis could have been avoided by a prompt follow-up of the original case had it been reported, and it was not, the veterinarian could be held liable. An additional concern was the incidence of infected birds not showing clinical signs. Cockatiels seem to be among the species that do not

manifest illness but continue to spread the disease.

Dr. Helga Gerlach reemphasized the problem of clinically normal cockatiels shedding Chlamydia psittaci. Her studies have shown that the organisms can be shed for 1-1/2 years by clinically healthy cockatiels. Some of the infected cockatiels develop a flaccid paralysis but no other sign. Chlortetracycline at the levels tested did not eliminate the shedding, much less the infection.

The committee meeting was held as a general forum. Dr. Howard Kahan of AAAP discussed reporting of pet bird diseases. A reporting form was handed out at the meeting (copies available to committee members). Dr. Richard Woerpel mentioned that currently their most rapid and accurate method of diagnosing chlamydiosis in larger psittacines was by using the diagnostic serology service of Dr. James Grimes at Texas A & M University at College Station, Texas. A high degree of correlation between clinical signs as well as blood and blood chemistry findings he has come to rely on and the titers detected by Dr. Grimes has been observed. He stressed that rapid diagnosis was the greatest need of the practitioner.

Other Developments

Recent Developments in the Diagnosis of Chlamydiosis

Three firms are now producing various types of kits for the rapid, accurate diagnosis of chlamydial diseases. Unfortunately, the organism which motivated the development of two of the three is Chlamydia trachomatis.

The test developed by the SYVA Company, Palo Alto, California, and Genetic Systems Corporation of Seattle, Washington, is based on a fluorescein-

labelled monoclonal antibody directed against a single antigen on the Chlamydia trachomatis organism. It would be of no value for the identification of Chlamydia psittaci.

Abbott Laboratories of North Chicago, Illinois, has developed a new enzyme-linked immunoassay called Chlamadiazyme. This was described earlier in the AAV Newsletter. Using the specificity of an antigen-antibody reaction and horseradish peroxidase plus the chromagen o-phenylenediamine for a label, this reaction detects chlamydial group antigens on the surface of the exposed organisms or the extracellular elementary bodies--dead--or alive. No reports on the use of this test in a modestly equipped clinical laboratory have come to our attention. A report ¹ on the two systems just described states, "Most laboratories and four of every ten hospitals already have the equipment such as a colorimetric spectrophotometer necessary for Abbott's new Chlamydiazyme."

A third monoclonal chlamydial identification system called "Cultureset" is available from Ortho Diagnostics Systems, Inc., Raritan, New Jersey 08869. According to the literature supplied by Ortho Diagnostics, the monoclonal chlamydia antibody is specific for chlamydia, recognizing all known strains of Chlamydia trachomatis as well as Chlamydia psittaci. "Cultureset" chlamydial identification reagents provide fluorescent and/or peroxidase methods for staining the antigen in tissue cultures or cytologic preparations. Unlike the nonspecific strains (e.g., Gimenez, Macchianello's, and Giemsa), the "Cultureset" chlamydial identification reagents are specific for the chlamydial organism. According to the descriptive literature, the reagents provide pretitrated, ready-to-use reagents with the option of indirect fluorescent antibody, direct fluorescent antibody stains, or peroxidase stain for standard

light microscopy. The price is approximately \$80 for 20 tests. To our knowledge, no evaluations of this system in a veterinary practice environment have been published.

¹Two new tests for chlamydia get quick results without culture. JAMA, November 4, 1983, 250(17), pp. 2257-2259.