AVIAN CHLAMYDIA DETECTED IN FREE-RANGE CHICKEN FLOCKS IN BOHOL, PHILIPPINES

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Abstract

Bacteria of the family *Chlamydiaceae* lowers production performance in poultry, affects poultry health, and are also known as zoonotic agents. Especially *C. psittaci*, but also *C. gallinacea* and *C. avium,* which are newly recognized, are being investigated on their pathogenicity and zoonotic potential. In Bohol province, there is increased effort in conserving genetic resources of indigenous chicken suitable for free-range production system. The screening for presence of avian *Chlamydia* will help in improving health and production performance of these chicken flocks. This study investigated the presence of *C. psittaci, C.* *gallinacea* and *C. avium* in free-range indigenous chicken flocks in the province. Samples (swabs; litter-feces and water) were collected in 16 flocks to be examined for the presence of avian *Chlamydia* spp. by using real-time polymerase chain reaction (qPCR) assay. Specific genes were targeted to detect *Chlamydiaceae* (*23S rRNA*), *C. psittaci* (*incA*), *C. gallinacea* (*enoA*) and *C. avium* (*enoA*). Fifteen out of 16 flocks (93.75%) were *Chlamydiaceae*-positive. Interestingly, all flocks were negative for *C. psittaci* and *C. avium* while 12 (75.00%) were *C. gallinacea*-positive. Three flocks (18.75%) were considered to harbor non-classified *Chlamydia* (being *Chlamydiaceae-*positive but species-specific*-*negative). DNA sequencing is underway to comprehensively compare the positive samples with existing strains. Certainly, *C. gallinacea* is widely spread in chicken flocks, thus it is interesting to further investigate on its interaction with the host and other poultry pathogens and its zoonotic potential. To our knowledge, this is the first report of *C. gallinacea* in apparently healthy free-range chicken in Bohol, Philippines.