

Pathogenicity of *Mycoplasma gallisepticum* and *Mycoplasma imitans* in red-legged partridges (*Alectoris rufa*)

ABSTRACT

Groups of 3-day-old red-legged partridges were infected intranasally either with the S6 strain of *M. gallisepticum* or with an *M. imitans* strain from a partridge with sinusitis. Starting 6-8 days post-infection (p.i.) birds in both groups developed signs of depression, nasal exudation, tracheal rales, sneezing, gasping, head shaking, watery eyes and eye scratching. The most outstanding feature was bilateral swelling of the infraorbital sinuses. Morbidity reached 100% in the *M. gallisepticum* infection and 80% in the *M. imitans* infection and mean clinical scores in the former were significantly greater than those of the latter group on days 11 and 14 p.i. There was also slower recovery in the *M. gallisepticum* infection. Necropsies at weekly intervals for 5 weeks revealed nasal and sinus exudate in both groups but tracheal exudate and cloudy airsacs were seen only in *M. gallisepticum* infection. *M. gallisepticum* was isolated from both upper and lower respiratory tract throughout the experiment while *M. imitans* was recovered less frequently from the upper respiratory tract and from the lungs and air sacs only at 7 days p.i. The numbers of isolations from eyes, tracheas, lungs and thoracic air sacs of the *M. gallisepticum* group were significantly greater than those from the *M. imitans* group. Seroconversion occurred in both groups using homologous antigen.

Keyword: Red-legged partridges; *Mycoplasma gallisepticum*; *Mycoplasma imitans*; *Alectoris rufa*