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