Hemorrhagic pneumonia in neonatal minks in Greece concomitant with *Leismania infantum* detection

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Abstract

In the present study a severe outbreak of hemorrhagic pneumonia (HP) in neonatal minks concomitant with *Leismania infantum* (*L. infantum*) detection is reported. The outbreak took place on a Greek mink farm and affected 1,362 mink kits, with 524 dying. Macroscopic lesions of 14 necropsied affected kits were confined to the respiratory system with dark red, consolidated lung lobes and to the small intestine with severe, acute, hemorrhagic and necrotic enteritis. Microscopic examination of lung sections revealed severe hemorrhagic pyogranulomatous pneumonia. Bacteria were obtained in pure culture from the lungs of all necropsied animals and were confirmed as *Pseudomonas aeruginosa* (*P. aeruginosa*). Three out of 14 (21.4%) animals were positive for the presence of *L. infantum* DNA. The outbreak was attributed to the infection of minks with *P. aeruginosa*, possibly as a consequence of being immuno-suppressed by *L. infantum*. Further research is necessary, especially on the pathogenesis of *P. aeruginosa/L. infantum* co-infection and the implications of this interaction on HP disease outcome.

Key words: mink, hemorrhagic pneumonia, *Pseudomonas aeruginosa*, *Leismania infantum*, Greece