

MYCOBACTERIUM AVIUM SUBSP. AVIUM INFECTION IN RED DEER (CERVUS ELAPHUS HIPPELAPHUS) FROM AUSTRIA

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Since January ten cases of *Mycobacterium avium subsp. avium* infections in free living red deer originating from different geographical regions in Austria were observed. The affected animals, nine adults (4 hinds, 5 stags) and one female fawn, showed diarrhoea and severe weight loss. They were shot by local hunters and the carcasses were submitted for post mortem to veterinary laboratories.

At necropsy, lymphadenitis associated with enlarged intestinal lymph nodes was present in all animals. While in some individuals lesions were restricted only to intestinal lymph nodes, in others lymph nodes and tissues of different organs such as those from the respiratory tract were affected. In Ziehl-Neelsen stained smears acid-fast bacilli were demonstrated in large numbers. One male animal showed singular tubercle (3-4 mm in diameter) localised in the subcutaneous muscle tissue.

Strains were identified as *M. avium subsp. avium* by cultural characteristics such as mycobactin dependency, growth on egg medium, or growth stimulation by pyruvate and pH 5.5. Isolates were additionally characterized by variety of PCR-based molecular techniques. Typing of strains was performed by PCR detection of insertion sequence IS901 and the virulence-associated *mig* (macrophage-induced gene), inverted repeat (IR) typing (IS1245/IS1311) and random amplified polymorphic DNA (RAPD) analysis.

Reasons for increasing numbers of *M. avium* infections in red deer and possible predisposing conditions are not known, so far. In mammals *M. avium* is generally considered to be a opportunistic pathogen and infection is mostly seen in immunocompromised individuals. The epidemiology of *M. avium* infections is poorly understood but infections are mostly regarded as environmentally acquired. A possible contamination of feeding places by droppings of birds has to be considered.

Zusammenfassung (??)

Résumé (??)