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Book of Abstracts

Histopathological findings and molecular diagnosis of *Nocardia* spp. in wild mammals

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Nocardiosis is an emerging zoonosis caused by *Nocardia* spp. bacteria. The disease is linked to infections in immunocompromised individuals, being potentially lethal when it turns systemic. The development of reliable and valid diagnostic methods is crucial to the identification of these pathogenic agents, particularly in wild mammals, which are potential reservoirs in the wildlife. A convenience sample of 114 wild mammals belonging to the orders Canidae, Cervidae, Erinaceidae, Herpestidae, Mustelidae, Suidae, and Viverridae were studied. Tissue samples (n = 206) were collected from different organs. Of the 206 tissue samples studied by PCR, *Nocardia* spp. were detected in 77 tissues (37.4%; 95% CI: 36.7–38.1%), mainly in mesenteric lymph nodes (13.1%; 95% CI: 12.4–13.9%) and kidneys (9.2%; 95% CI: 8.5–9.9%). In addition to these, it was possible to detect the microorganism in other tissues such as bladder (2.4%; 95% CI: 1.7–3.1%), brain (0.49%; 95% CI: 0.2–1.2%), ileocecal valves (0.97%; 95% CI: 0.3–1.7%), liver (0.49%; 95% CI: 0.2–1.2%), lungs (5.3%; 95% CI: 4.6–5.9%), mediastinal lymph nodes (2.4%; 95% CI: 1.7–3.1%), retropharyngeal lymph nodes (0.97%; 95% CI: 0.3–1.7%), and tonsils (1.9%; 95% CI: 1.2–2.6%). The differences were statistically significant ($p = 0.019$). Histological lesions consistent with a diagnosis of *Nocardia* spp. infection were detected in 65 animals (57.0%; 95% CI: 56.1–57.9%). These lesions consisted of abscesses (1/114; 0.9%; 95% CI: 0.0–1.8%), caseocalcareous granulomas (21/114; 18.4%; 95% CI: 17.5–19.3%), dermatitis (1/114; 0.9%; 95% CI: 0.0–1.8%), lymphadenopathy (2/114; 1.8%; 95% CI: 0.21–6.19), orchitis (1/114; 0.9%; 95% CI: 0.0–1.8%) and purulent lymphadenitis (39/114; 34.2%; 95% CI: 25.6–43.7%).

These results provide new insights on the prevalence of *Nocardia* in wild mammals and highlight the need for surveillance of wildlife as a potential reservoir of these emergent pathogens.