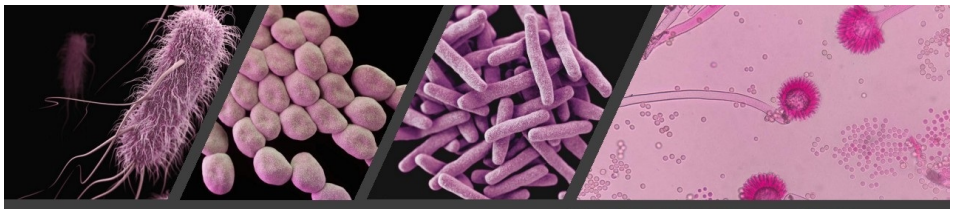

Contribution ID: **19** Type: **Oral presentation**

Mycobacterium bovis infected domestic cats in an officially bovine tuberculosis free country resulting in human infection

Friday 12 September 2025 15:15 (15 minutes)

Despite the official bovine tuberculosis free status, Mycobacterium bovis sporadically causes tuberculosis (TB) in non-bovine mammals in the Netherlands. In early 2023, two domestic cats from unrelated households were diagnosed with M. bovis following euthanasia due to severe respiratory symptoms. In one household, three additional cats were euthanized, with post-mortem confirmation of M. bovis infection. An epidemiological link was hypothesized but not supported by genetic analysis, as the isolates from the two households differed in spoligotype and by at least 500 single nucleotide polymorphisms (SNPs). Commercial raw pet food was suspected as the probable source, but this could not be confirmed.

Given the zoonotic potential of M. bovis, human contacts were screened using the Tuberculin Skin Test (TST) and Interferon-Gamma Release Assay (IGRA). Lung lesions were detected by computed tomography in a TST-positive, IGRA-negative contact and M. bovis DNA was isolated from a lung biopsy. This DNA contained specific SNPs also identified in the feline M. bovis isolates from the respective household, supporting the hypothesis of intra-species M. bovis transmission. All TST-positive contacts received antibiotic therapy.

These cases indicate that TB should be considered in the differential diagnosis of respiratory conditions in companion animals and highlight the need for One Health vigilance to prevent M. bovis transmission among humans, companion animals, wildlife, and livestock.

Keywords

Feline tuberculosis, Mycobacterium bovis, Zoonosis, Human transmission, Officially bTB free (OTF) country, The Netherlands

Registration ID

ECVM25-67

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Session Classification: Epidemiology

Track Classification: Veterinary Bacteriology, Mycology and Virology