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Mycobacterium microti is a member of the *Mycobacterium tuberculosis* complex (MTBC), which also includes major human and animal pathogens such as *M. tuberculosis* and *M. bovis*. *M. microti* was originally described as the cause of tuberculosis in wild rodents, but it can also infect several other animal species including people, highlighting its zoonotic potential (Cavanagh and others 2002; Panteix and others 2010).

In 2015, we reported a case of *M. microti* infection in a dairy goat, showing that this mycobacterium could be responsible for misleading bovine tuberculosis (bTB) diagnostic results (Michelet and others 2016). An extended investigation in the same region led to the discovery of an additional case in a cow. As for the goat herd, the suspected cattle herd shared the same pastures with two bTB (*M. bovis*) confirmed herds identified in 2005 and 2015. As a result, the cattle herd was submitted to the single intradermal cervical comparative test. One animal with a doubtful result was culled for direct diagnosis. No lesions were observed at the abattoir on mediastinal, retropharyngeal and tracheobronchial lymph nodes. Samples were analysed and submitted to bacterial culture and PCR (Courcoul and others 2014). Culture was negative after three months in all samples. However a doubtful result was obtained by PCR on the retropharyngeal lymph node. Further characterisation was performed on the extracted DNA employing molecular tools targeting the Regions of Difference which allow differentiation of the MTBC members (Huard and others 2003) and through spoligotyping (Zhang and others 2010). All these tests enabled the identification of *M. microti* spoligotype SB0118, which is the same genotype identified in the goat and in a badger of the same region.

M. microti had previously been isolated in skin test reactor cattle in the UK (Jahans and others 2004), demonstrating the risk of infection in livestock and of interference with bTB diagnosis. All these findings raise concern about the reliability of diagnostic tests used for bTB surveillance. The use of highly specific tests based on specific antigens such as ESAT 6 and CFP10 (which are absent in *M. microti* and already currently used in the interferon gamma test employed in France (Faye and others 2011)) are highly recommended to accurately identify *M. bovis* (or *M. caprae*) infection at ante-mortem examination. At post-mortem diagnosis, the use of specific molecular tools should be consider to rapidly distinguishing pathogens within the MTBC and avoid misleading diagnosis.

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