臺灣牛隻牛結核病分子流行病學研究

生物組

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摘要

牛結核病(bovine tuberculosis, bTB)是 *Mycobacterium bovis* (*M. bovis*)感染所造成的重要人畜共通傳染病，牛為主要宿主，但可感染多數哺乳動物。感染後依感染途徑會於頭胸部淋巴結或腹腔臟器產生特徵性結節病灶。皮內結核菌素試驗(Intradermal tuberculin test, ITT)是國際間貿易用的標準牛結核病檢驗方法，也是我國標準檢測方法。統計臺灣 2020 年至 2023 年牛結核病陽性場案例，2020 年下半年起屠宰場發現多起病例，陽性場大增，再將 *M. bovis* 分離株以結核菌群常用之兩種基因分型方法 Spoligotyping 及 MIRU/VNTR (ETR-A、ETR-B、Qub11b 及 Qub26 四個位置)進行分子流行病學分析，2023 年共得 26 個基因型別，為歷年之最。

Molecular epidemiological study of bovine tuberculosis in Taiwan cattle

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Abstract

Bovine tuberculosis (bTB) is an important zoonotic disease caused by *Mycobacterium bovis*. Although, cattle are considered to be the main hosts, most mammals can be infected by *M. bovis*. Depending on the route of infection, characteristic nodular lesions can be observed in lymph nodes of the head and chest, or in abdominal organs. Intradermal tuberculin test (ITT) is the standard testing method for bovine tuberculosis used in international trade, and is also the standard testing method in Taiwan. We analyzed bTB positive cases in Taiwan from 2020 to 2023, and discovered that since the second half of 2020, many cases have been found in slaughterhouses, and the number of farms with positive cases increased. The *M. bovis* isolates were genotyped by two genotyping methods commonly used for *Mycobacterium tuberculosis* complex for the purpose of molecular epidemiological analysis: spoligotyping and MIRU/VNTR typing (four loci, ETR-A, ETR-B, Qub11b and Qub26). A total of 26 genotypes were obtained in 2023, the most in the history.