LETTER

Prevalence and Molecular Characteristics of Enterococci Isolated from Clinical Bovine Mastitis Cases in Ningxia [Letter]

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Dear editor

With grateful curiosity, we have intently studied an original article titled "Prevalence and Molecular Characteristics of Enterococci Isolated from Clinical Bovine Mastitis Cases in Ningxia" by Liu et al.[1] This is a very valuable study because it focuses on the investigation of the prevalence, antimicrobial resistance, and virulence characteristics of Enterococci isolated from clinical bovine mastitis in Ningxia Hui Autonomous Region, China, is important as it provides valuable insight into the incidence rate of Enterococci in clinical bovine mastitis cases which is an opportunistic mastitis pathogen present in the environment. *Enterococcus* spp. may work as a reservoir of antimicrobial-resistance genes, allowing them to be transmitted to humans through the food chain.[2]

The researcher in this paper used the culturing milk samples on sheep's blood agar for bacteria identification. Enterococcus bacteria had been found to grow, which were identified based on morphological features, then confirmed by PCR. In fact, several studies have shown that *Enterococcus* spp., *Staphylococcus aureus, Streptococcus agalactiae, Streptococcus uberis, Escherichia coli*, and *Klebsiella pneumoniae* are the pathogen types that are most frequently found in cases of mastitis.[3] In this study, the detection and sequencing of Enterococcus DNA are very important to confirming bacterial infections that cause mastitis, but we suggest applying the Real-Time Polymerase Chain Reaction (RT-PCR) technique, which has expanded into multiplex real-time PCR (rPCR) to diagnose specific mastitis infections. Bacterial culture and isolate identification are considered the gold standard in mastitis diagnosis but are time-consuming and produce many culture negative samples. Multiplex rPCR has proven to be extremely reliable in the diagnosis of mastitis since it can detect a huge number of bacteria in a relatively short time when compared to traditional methods, and mixed-infection mastitis pathogens are also more easily identified.[4,5] Identification is also possible for clinical pathogen samples that fail to grow in culture. The low concentration of bacteria in milk has been suggested as one of the reasons for the absence of growth in bacterial culture.[4] Even though there may have been other bacteria in the milk samples in this study that caused an increase in mastitis. Rapid and accurate identification of mastitis pathogens is important for early disease control.

In addition, antibiotic treatment has been utilized to manage mastitis. However, greater antimicrobial exposure in the environment may result in a rise in the number of multidrug resistant organisms. Antimicrobial resistance (AMR) is a topic that represents the One Health approach because it affects humans, the environment, and animals. Therefore, in the future, it is critical to investigate the AMR problem in dairy products regarding the incidence of mastitis through a One Health approach. Given the perspectives we presented, there is potential to improve the findings of this study for future research.

2607

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Disclosure

The authors report no conflicting interests in this communication.

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