Review of: "Clinical and Subclinical Bovine Mastitis: Staphylococcus aureus Isolation and Identification from Dairy Farms Located in and Around Hawassa Town, Southern Ethiopia"

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Potential competing interests: No potential competing interests to declare.

Revisions

The study provides a methodology for milk sample collection, isolation, and *S. aureus* identification, incorporating statistical analysis, notably using logistic regression. However, concerns arise from instances of repetitive information and ambiguity in certain methodological choices, specifically concerning *S. aureus* identification criteria. Clarity in this aspect is paramount for the study's validity. Additionally, the explanation of statistical methods in the data analysis section requires improvement for better comprehension. Addressing these issues, along with offering more clarity and considering graphical representation of relevant information, would significantly enhance the overall quality, clarity, and reader engagement of the study.

Abstract:

The methodology presented in the abstract should align closely with the stated objectives of the study. Specifically, the methods section should focus on the testing for *S. aureus* rather than emphasising the identification of clinical and subclinical mastitis.

The results outlined in the abstract should follow a logical progression, starting with the findings related to clinical/subclinical mastitis, followed by the identification of *S. aureus*, and concluding with the outcomes of the regression analysis.

Introduction:

Given the prevalence of research on mastitis, it is recommended to incorporate more recent references rather than relying solely on older sources to ensure the study is anchored in the latest developments in the field.

Materials and methods:

In the section on Milk Sample Collection, it is noted that samples were obtained from each quarter, while under Udder Cleaning, the sample was collected from the entire udder. It is essential to elucidate the rationale behind the different cleaning methods employed: tap water for individual quarters and 70% alcohol for the entire udder. Additionally, clarification is needed regarding whether there are specific guidelines guiding these procedures, and if so, please provide the corresponding reference.

In the section on Isolation and Identification, the initial lines appear to be repetitive and could be omitted without compromising the content. It is advisable to avoid unnecessary repetition for a more concise and focused presentation of

the isolation and identification process.

The lines indicating, 'Samples were considered positive for *S. aureus* when the suspected isolates were catalase-positive, coagulase-positive, and showed rapid fermentation of maltose on PAB,' raise concerns. It seems that the confirmation of staphylococci as *S. aureus* is based on parameters that can yield negative results. The author should provide clarification on the criteria used for *S. aureus* identification. For example, the following conditions are possible:

Catalase-positive, Coagulase- positive, Maltose fermentation positive;

Catalase-negative, Coagulase-negative, Maltose fermentation positive;

Catalase-positive, Coagulase-negative, Maltose fermentation positive;

Catalase-positive, Coagulase-positive, Maltose fermentation negative;

Etc etc

However, the author of this study claims *S. aureus* identification based solely on the fulfilment of the first condition. Although any of the above combinations can be or cannot be *S. aureus*, this raises questions about the reliability and relevance of the study results, as using biochemical tests that can be negative may impact the accuracy and robustness of the identification process. Take a look at this study “doi: 10.3390/antibiotics9090616”

In the section on Data Collection and Analysis, the author states, 'The degree of association between risk factors and the prevalence of mastitis was analysed using the odds ratio (OR). Furthermore, logistic regression was used to examine the association of the potential risk factors with the occurrence of mastitis using STATA Corp.' It is essential to seek clarification on the author's intent in specifying both the use of the odds ratio and logistic regression. Typically, logistic regression is employed to calculate odds ratios; therefore, the rationale behind presenting both methods needs clarification for a better understanding of the analytical approach.

Results:

In the Prevalence of Mastitis section, the author notes, 'There was a higher prevalence of subclinical mastitis than clinical mastitis, both at the cow and quarter levels.' It is crucial to ascertain whether this difference in prevalence is statistically significant. If so, the reviewer should seek clarification on the specific statistical test employed to determine the significance of the observed disparity.

In the Risks Factors Associated with Mastitis section, the author presents textual information that could potentially be visually represented, enhancing clarity and reducing the overall text. Utilising graphical representations, such as charts or graphs, could be beneficial in conveying the information more succinctly for readers.