

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.

Dear editor,

I would like to express my gratitude for inviting me to review the article titled *Clinical and Subclinical Bovine Mastitis: Staphylococcus aureus Isolation and Identification from Dairy Farms Located in and Around Hawassa Town, Southern Ethiopia*. Although a lot of literature is available on this subject, there is nothing quite like first-hand observations to help clarify the epidemiology of this significant endemic disease under local conditions.

The authors aimed to survey a specific Ethiopian region to determine the prevalence of intramammary infections (IMI) caused by *S. aureus*, a major pathogen associated with this condition. They collected milk samples from cows suspected of IMI and carried out a bacteriological examination to measure the prevalence of the infection. Additionally, the authors aimed to identify certain risk factors within the farms or animals that may contribute to the diagnosis of IMI.

I believe the authors possess all the necessary material to write a decent article. However, I object to publishing this manuscript as is and suggest a significant revision before doing so.

1. The authors conducted a survey on 250 animals that were selected from farms chosen randomly. However, if I understood correctly, the samples were only taken from quarters of the udder that showed a positive reaction to the CMT test. This procedure is open to criticism on two points.
 - a. The CMT (California Mastitis Test) is not a very sensitive test. Its threshold for detecting positive IMI is quite high, meaning cows with negative CMT results may still have infections. It is possible for cows infected with *S. aureus* to have SCC levels lower than 100k and a negative CMT (or so), which can lead to underestimating the prevalence of subclinical disease. To get a more accurate estimate, the authors should have collected milk from all four quarters of all 250 animals.
 - b. Luckily, the authors were able to witness some instances of clinical mastitis. Based on the approach utilized, it might also be a case of chronic mastitis, with more evident symptoms on the day of the visit. Determining the prevalence of clinical mastitis would be tricky.
 - c. The method, however, retains a certain value, but a clear critical analysis must accompany its presentation.

Furthermore, we will appreciate reading the words "prevalence" and "incidence" (rather than the word 'occurrence').

2. The authors have explained the difference between clinical and subclinical intramammary infections (IMI). However, the results and discussion do not seem to consider this distinction, which may be due to the survey methodology. It is difficult to differentiate between clinical and subclinical cases and assign distinct epidemiological characteristics to each. Instead, the authors group both forms under the term 'mastitis', with the characteristics of subclinical mastitis dominating the discussion. Therefore, it is recommended to abandon the distinction between the two forms and only refer to intra-mammary infection.
3. I think the microbiology section needs to be rewritten. The methods presented lack order. You have to move from incubation to testing and then to interpretation.
4. The authors have presented only the results related to *S. aureus*. It is surprising that they did not isolate other disease-causing germs. If this is the case, then it can be concluded that all the CMT+ quarters taken are infected by *S. aureus*, or else the number of sterile quarters should be indicated.
5. Mastitis in dairy cows has been extensively studied for over a century, with publications on the topic spanning the globe. However, some of the general statements made by the authors regarding the disease's epidemiology require further documentation. See my comments disseminated within the document.
6. I also recommend that the manuscript be proofread by a native English speaker.

I will happily reread an updated version of this manuscript.