

Review of: "Nasal Carriage of *Staphylococcus aureus* and Antibioqram among Medical Undergraduate Students of a Private University in Ogun State, Nigeria"

Daniela Bencardino¹

¹ University of Camerino

Potential competing interests: The author(s) declared that no potential competing interests exist.

This study assessed the nasal prevalence of *S. aureus*, among medical undergraduate students of a private university in Ogun state. This is very useful investigation because the presence of nasal carriers is crucial for the transmission of *S. aureus* pathogens, in particular for the spread of strains antibiotic-resistant such as MRSA. However, the manuscript needs important revisions both in terms of structure/methodology and English editing as described within the following comments:

Title: *Staphylococcus aureus* within title should be reported in italic;

Abstract

First line of abstract: add a space after transmission "Nasal carriage plays a crucial role in the transmission *Staphylococcus aureus*";

Introduction

Authors reported that *S. aureus* colonizes primarily the human skin, but they should better explain that this pathogen is involved in colonization of multiple body sites (the skin, rectum, inguinal area, gastrointestinal tract and axilla) and the anterior nares represent the main reservoir.

Authors reported that "Infection and transmission of *Staphylococcus aureus* have been linked to nasal carriage in hospitals and hospital-related community settings" that is true, but my suggestion is to mention the presence of nasal carriage status also among healthy people working in other settings such as food.

Use the past simple throughout the text, e.g. the aim of this study WAS to...

Add – between methicillin and resistant.

Authors stated that *S. aureus* is responsible for a broad spectrum of infections without mention them. The description of the main could be very useful to better understand the risk associated with antibiotic-resistance.

The last part of introduction mention the risk associated with carriers of *S. aureus* among healthcare workers, but no references have been reported.

Methodology

Information listed from "study area" to "exclusion criteria" should be collected within the section "Study design" avoiding details concerning geographical localization.

It is not clear if the swab collection has been carried out two times for the same student. It could be very informative in terms of persistent carriers.

Section “Sample collection”: (to ensure the viability of the organism in questioned prior the time of analysis in the laboratory. Add bracket

Why authors reported “eventually” for the transportation of samples to laboratory? It is not clear

Chocolate agar is a selective differential medium for Gram-positive cocci. Usually, Baird-Parker agar is more adequate to select *S. aureus* colonies after the isolation on MSA. Furthermore, add information about company that provided these media.

Why incubation for 48 hours? Twenty-four hours is enough.

In general, the section of antibiotic sensitivity testing need to be improved. I suggest to consider a published paper to modify its structure. Here is reported the description of Kirby Bauer method and MIC without references. Add them.

Furthermore, the size of antibiotics tested is very small (only 5 atbs).

Authors need to define the reference considered to define “resistant”, “intermediate” and so on..

There are two sections titled “Results”, authors should clarify within the text

Results

Authors mention “nose hygiene belief” and “nose hygiene practices”, clarify the difference

Figure 1 is not necessary

How many females and males have been tested? This manuscript reported only the rate of carriers females or males.

No results concerning persistent or intermittent carriers are reported because authors collected only one swab for each student and I think that it is a drawback of the study.

How did students measure frequent antibiotic intake?

Figure 2: improve the graphic visualization

Figure 3 is not necessary

Discussion

Within this section some results have been reported again resulting redundant.

Authors compare the carriage rate found in their study with the others and reported that no gender association can be found. This is not completely true because the manuscript does not indicate the number of females or males tested.

In general, the discussion is merely written as comparative analysis between results obtained with the others. Authors should use more critical views to highlight the aim of the work.

Conclusion

To conclude that the increased risk is due to misuse of antibiotics, authors need to analyse the clinical history of each student and in particular prior antibiotic treatment.