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Methicillin-resistant *Staphylococcus aureus* isolated from the pharynx and nose in children from Mexico City

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Introducction

Staphylococcus aureus is a Gram-positive bacterium that lives in symbiosis with humans, it is an opportunistic and potentially lethal pathogen [1, 2] of great clinical importance due to the different virulence, invasiveness and resistance factors that it may possess [3].

The widespread use of antibiotics, particularly their inappropriate and excessive use, has favored the emergence and maintenance of strains of *S. aureus* resistant to multiple antibiotics such as penicillin, methicillin (methicillin-resistant *S. aureus* (MRSA) or vancomycin that are associated with high rates of morbidity and mortality in many regions of the world [5].

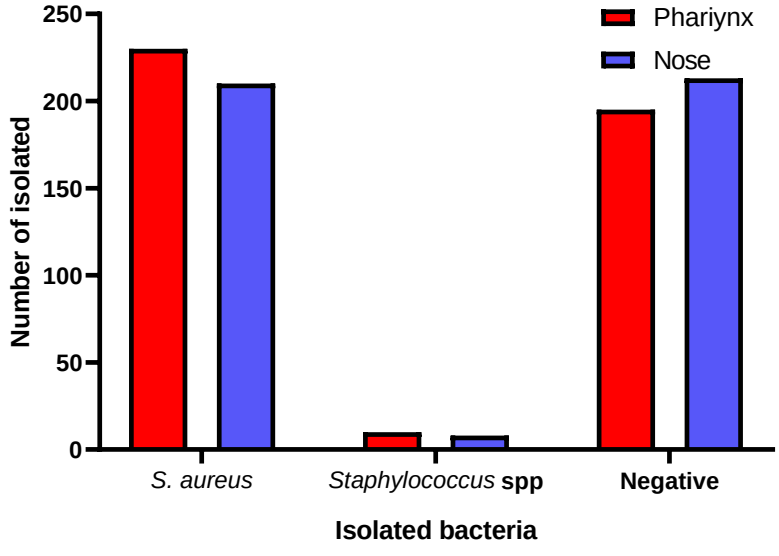
S. aureus have been found in the pharynx and have been reported with high variability in different populations from 4 to 64% [4], some studies mention a higher rate of carriers in the pharynx than in the nose when samples are taken in parallel [4,5].

Methods

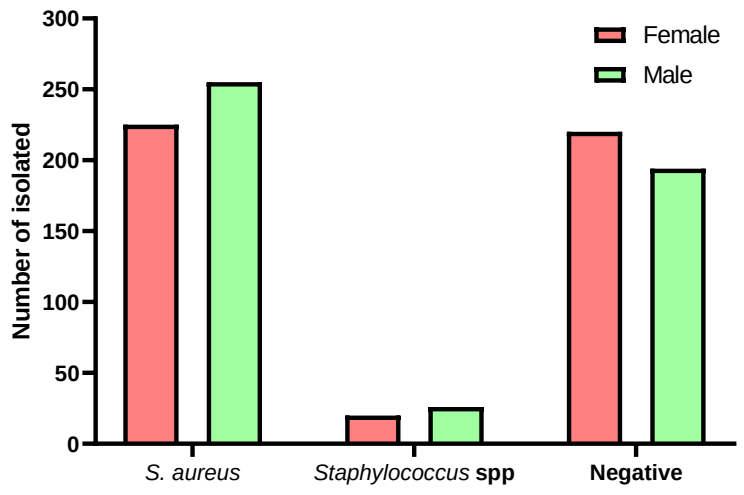
476 pharyngeal and nasal exudates were performed on pediatric patients under 16 years of age between 2013 and 2019, the swabs were stored in Tryptic Soy Broth, and they were inoculated on Mannitol Salt Agar and incubated for 24 hours at 37 °C. The presence of *S. aureus* was determined by fermentation of mannitol and positivity to the coagulase test or by sequencing of the 16S rRNA gene. The antibiogram test and the minimum inhibitory concentration (MIC) for oxacillin were also performed. Methicillin resistant strains were those that grew in concentrations greater than 4 µg/mL.

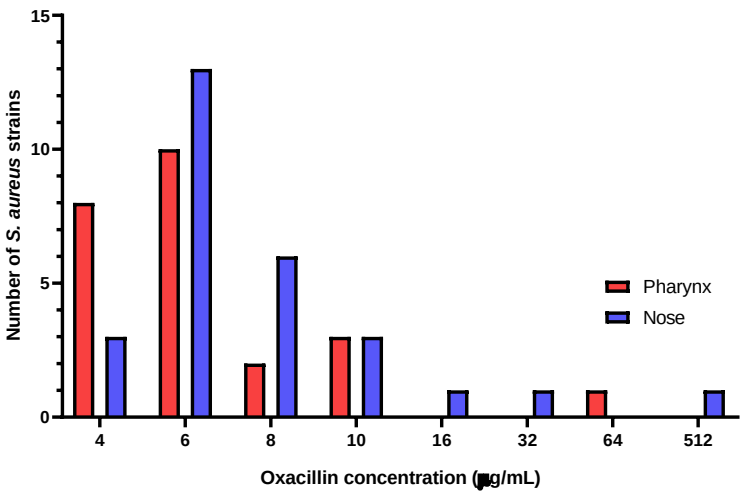
Results

Isolates of *Staphylococcus* in the pharynx and nose.



Isolates of *Staphylococcus* by gender.





Conclusions. 1 More strains of *S.aureus* were found in the pharynx than in the nose, 2 There are more female carriers, 3 There are more MRSA strains in the nose.

References

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