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THE COVID-19 AND SALIVA PARADOX



To the Editor:—We read with great interest the article by Chigurupati et al¹ in the Journal of Oral and Maxillofacial Surgery. In their article, the authors presented solutions to keep our patients and health care personnel safe in coronavirus disease 2019 (COVID-19) era. We compliment Chigurupati et al¹ for the excellent review and would also like to express our considerations. We would like to comment on 2 aspects that could be taken into account for future studies, considering that saliva plays 2 antagonistic yet equally important roles.

The saliva contains live severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that may be transmitted via saliva specimens.^{2,3} The risk of contagion via saliva led to the development of dental care guidelines by responsible entities to teach professionals preventive infection control measures. The guidelines recommend that dentists prioritize emergency cases, postpone elective procedures, and reduce aerosols as much as possible (www.ada.org). To conform with these measures, fewer patients are being examined and treated in the dental clinic. This has adverse impacts on oral health, like delays in the detection and diagnosis of oral cancer. The fear of COVID-19 has changed the priorities and thought process of patients, leading them to assess the need to leave their homes for dental treatment. However, this fear should not be a reason to avoid health care and worsen the prognosis of other health conditions.^{1,4}

Paradoxically, saliva is an asset for quick and accurate diagnosis of COVID-19. Rapid serologic tests using blood or plasma and traditional tests using respiratory tract specimens need trained professionals and a basic infrastructure to collect and process the material. They increase the exposure of health care staff, cause discomfort to patients, and cannot be self-collected by patients.¹⁻³ Saliva specimens can be an alternative for COVID-19 diagnostic testing. It offers the advantage of being less invasive and easier to collect, with lower expense. It can also be self-collected safely and can be analyzed in a shorter time to confirm the diagnosis.² Diagnosis using saliva is possible because the local immune system of the salivary glands produces immunoglobulin M and immunoglobulin G. In addition, saliva samples contain the virus in transmissible form.³

Concordance rate of saliva specimens with nasopharyngeal aspirate is greater than 90%, with high sensitivity and specificity in the detection of respiratory viruses. In viral culture, SARS-CoV-2 was detected in the self-collected saliva of 91.7% (11 of 12) patients suspected of COVID-19.² Moreover, using saliva for diagnostic purposes opens up a range of possibilities besides virus detection, such as the use of proteomics, metabolomics, detection of antibodies, chemokines, and cytokines, which allow rapid diagnostics.⁵ An accurate study involving the collection of saliva from different patients at different times can be useful in studying the transmissible form of SARS-CoV-2 and help in vaccine and therapeutic antiviral development.^{1,2}

Therefore, it is of paramount importance to support studies investigating the impact of salivary specimen tests on transmission and early diagnosis. This knowledge will help adopt preventive protocols and measures to test, isolate, and treat a large number of patients quickly and safely. Thus, an attempt to combat the spread of SARS-CoV-2 can be made.

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