



## LETTER TO THE EDITOR

**Dental clinical recommendations against COVID-19, according to scientific evidence****Recomendaciones clínicas odontológicas frente al COVID-19, de acuerdo con la evidencia científica**

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*Dear Editor:*

It is very interesting to read the editorial "Severe acute respiratory infection (COVID-19): an evident threat", written by the author Miguel Ángel Serra Valdés<sup>(1)</sup> and published in this journal. The information presented gives an excellent historical description of the appearance and evolution of the Coronavirus disease 2019; describes precisely the taxonomic, biological and

genomic characteristics of SARS-CoV-2 and provides us with updated epidemiological data that allows us to have a clear idea of how the virus is spreading worldwide. On the other hand, it emphasizes the importance of being prepared to fight against infectious diseases because this disease has a rapid evolution that results in fear not only in people in general but also in the health



professionals who must necessarily be in direct contact with the patient, as in the case of the dentist. For this reason, we would like to specify certain dental clinical recommendations, based on the scientific evidence available up to now.

It is known that the main mode of transmission of COVID-19 is through droplets of saliva, expelled when sneezing or coughing; that is why until April 5, 2020, Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has infected 1,133,758 people, about 62,784 of which have died worldwide; these values are represented by a fatality rate of 5,54 %.<sup>(2)</sup> This is not surprising, since the virus has the capacity to generate new infected cases in the first months of the outbreak (Rho) between 2.24 (95 % CI: 1,96-2,55) and 3,58 (95 % CI: 2,89-4,39); that is to say, one person could transmit the virus from 2 to 4 people, on average.<sup>(3)</sup>

Being aware of the way this virus spreads, it is important that the dentist takes the following recommendations, based on the currently available scientific evidence.<sup>(4,5,6,7,8,9)</sup>

1. Only attend emergency cases such as patients with pain and/or infection.<sup>(4)</sup>
2. When the patient attends to the consultation, evaluate if he has a fever above 38 °C, cough or respiratory distress; if this is the case, refer the patient to the nearest hospital where there is specialized medical attention, reschedule his dental appointment 20 days later and report what happened to all the staff who work with the dentist.<sup>(4)</sup>
3. In the case of suspected COVID-19 patients, paracetamol can be prescribed for pain or

fever; it is preferable to avoid the use of corticosteroids.<sup>(5)</sup>

4. Wash your hands with soap and water for 20 seconds or rub your hands with alcohol-based gel before and after treating any patient.<sup>(6)</sup>
5. The dentist and all his support staff must wear personal protective equipment: protective glasses; N95, FFP2 or FFP3 particle respirator type masks; gloves; face shield and protective gown. The use of a conventional surgical mask is not recommended for the clinical staff, since it does not filter saliva droplets below 5µm.<sup>(7)</sup>
6. Keep a minimum distance of 1 meter from the patients who are in the waiting room as well as from the reception staff.<sup>(4,7)</sup>

If it is necessary to attend a patient who has acute pain or dental infection, the following additional recommendations should be followed:

7. Use mouthwashes containing alcohol to disinfect the patient's mouth; on the other hand, 0,12 % chlorhexidine has not yet shown virucidal effects against SARS-CoV-2.<sup>(4,6)</sup>
8. Make absolute isolation with a rubber dam to perform any intraoral clinical procedure and even more if a low or high speed turbine is used, since the rubber dam has been shown to reduce by 70 % the amount of droplets of saliva dispersed in spray form up to 1 meter around the oral cavity. In case that absolute isolation cannot be made and the use of a high or low speed turbine is required, use the rubber or lens that is placed on the tip of the LED light curing lamps and place it on the turbine; in this way, the dispersion of aerosol



particles emitted from patients will be reduced.<sup>(4,6,7)</sup>

9. Use saliva suction equipment and apply it at high power, especially when using the high or low speed turbine.<sup>(6)</sup>
10. When curing a tooth, preferably use the atraumatic restorative technique (ART); if that is not possible, use a dam or the opaque lens that is placed on the tip of the Led lamp that is used to protect the eyes during light curing.<sup>(4)</sup>
11. Avoid the use of periapical radiographs as much as possible, and if necessary, replace them by orthopantomography. This is recommended not provoke a gag reflex in the patient; in the same way, it is suggested to avoid conventional impression and use CAD/CAM technology instead.<sup>(6)</sup>
12. Avoid the use of fans, as they can disperse salivary droplets from the patient's mouth at great distances when using turbines. Please note that SARS-CoV-2 aerosol can stay airborne for up to 3 hours.<sup>(9)</sup>
13. After the dental procedure, disinfect all surfaces in the area where the patient was attended with fiber cloths dipped in 0,5 %

sodium hypochlorite (approximately 20 cc or 4 teaspoons of 5 % bleach diluted in one liter of water) or 70 % ethanol in areas that can be damaged by the chlorinated compound.<sup>(8)</sup> Take into consideration that COVID-19 can remain stable on the copper surface for 4 hours, on paperboard for 24 hours, on stainless steel for 48 hours and on plastic for 72 hours.<sup>(9)</sup>

COVID-19 is an evident threat against global public health as Dr. Miguel Ángel Serra Valdés very well mentions<sup>(1)</sup> and it has shown that many health policies have been insufficient against a rapidly spreading pandemic, which has wreaked havoc not only on public health but also on the social, economic and emotional levels. For this reason, it is important that the dentist feels protected against SARS-CoV-2 and assumes his role and provides a solution to the patient who requires emergent care, thus avoiding emergency room crowding in hospitals; however, it is important to apply all barriers and recommendations for disinfection in accordance with current scientific evidence, since to date there is no vaccine against COVID-19.

## REFERENCES

1. Serra Valdés MA. Infección respiratoria aguda por COVID-19: una amenaza evidente. Rev haban cienc méd [Internet]. 2020 [Cited: 05/04/2020];19(1):1-5. Available from: <http://www.revhabanera.sld.cu/index.php/rhab/articulo/view/3171>
2. World Health Organization. Coronavirus disease 2019 (COVID-19): situation report-76 [Internet]. Ginebra: World Health Organization;

2020. [Cited: 05/04/2020]. Available from: <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200405-sitrep-76-covid-19.pdf?sfvrsn=6ecf09772>
3. Zhao S, Lin Q, Ran J, Musa S, Yang G, Wang W, *et al*. Preliminary estimation of the basic reproduction number of novel coronavirus (2019-nCoV) in China, from 2019 to 2020: A data-driven analysis in the early phase of the outbreak. Int J Infect Dis [Internet]. 2020



[Cited: 01/04/2020];25(7):214-17. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7001239/>

4. Peng Z, Xing Y, Xiang W, Zhang L, Ben H, Wei Z, *et al.* A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature* [Internet]. 2020 [Cited: 01/03/2020]; 579:270-3. Available from: <https://doi.org/10.1038/s41586-020-2012-7>

5. Xie X, Li Y, Sun H, Liu L. Exhaled droplets due to talking and coughing. *JR Soc Interface* [Internet]. 2009 [Cited: 02/04/2020];6(Suppl 1): S703-4. Available from: <http://doi.org/10.1098/rsif.2009.0388.focus>

6. Meng L, Hua F, Bian Z. Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine. *J Dent Res* [Internet]. 2020 [Cited: 02/04/2020];99(5):1-7. Available from: <https://doi.org/10.1177/0022034520914246>

7. Calvo C, López M, De Carlos J, Vázquez J. Recomendaciones sobre el manejo clínico de la

infección por el “nuevo coronavirus” SARS-CoV-2. Grupo de trabajo de la Asociación Española de Pediatría (AEP). *An Pediatr* [Internet]. 2020 Mar 12 [Cited: 02/04/2020];92: [approx. 2 p.]. Available from: <https://doi.org/10.1016/j.anpedi.2020.02.001>

8. Interim guidance for environmental cleaning in non-healthcare facilities exposed to SARS-CoV-2. ECDC technical report [Internet]. 2020 [Cited: 02/04/2020]. [approx. 3 p.]. Available from: <https://www.ecdc.europa.eu/sites/default/files/documents/coronavirus-SARS-CoV-2-guidance-environmental-cleaning-non-healthcare-facilities.pdf>

9. Doremalen N, Morris D, Holbrook M, Gamble A, Williamson B, Tamin A, *et al.* Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1. *N Engl J Med* [Internet]. 2020 Mar 17. [Cited: 31/03/2020];382: [approx. 2 p.]. Available from: <https://www.nejm.org/doi/full/10.1056/NEJMc2004973>

### Conflict of interests

All authors declare no competing interests.

### Contribution of authorship

CFCR: He conceived the idea and developed the final version of the manuscript

CABS: He did the bibliographic search and the critical review of the manuscript.

All the authors participated in the discussion of the results and read, reviewed and approved the final text of the article.

