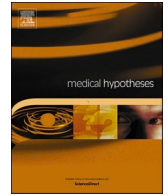




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Letter to Editors



Anticholinergic drugs versus preprocedural mouth rinses for reduction of SARS-CoV-2 load in dental aerosols

We read with great interest an article by Reis et al. [1] titled “Can preprocedural mouth rinses reduce SARS-CoV-2 load in dental aerosols?” The authors hypothesized that mouth rinses may reduce SARS-CoV-2 viral load in the oropharynx and its fluids reducing viral load in a dental aerosol. Moreover, the authors have comprehensively discussed the potential use of mouth rinses along with a proposal of in vitro and clinical studies for the evaluation of the proposed hypothesis. We take this opportunity to put forth the pragmatic viewpoint related to the proposed hypothesis and possible modifications in the recommendations.

Dental aerosols usually arise from ultrasonic scalers, air–water syringes and slow/high-speed handpieces [2]. These instruments have ionized water source incorporated in their systems, which forms the primary source of dental aerosols. Hence, technically speaking dental aerosols originating from an inbuilt water source cannot be the primary source of SARS-CoV-2 contamination. However, during dental procedures saliva of the patient may come in contact with high-speed dental instruments and that may generate contaminated aerosols. Such type of contamination is quite conceivable as SARS-CoV-2 virus particles have been detected in salivary samples of COVID-19 patients to such an extent that a salivary swab has now been considered as an alternative to the nasopharyngeal swab for diagnostic purpose. [3]

The preprocedural mouth rinse is done before the actual start of the dental treatment. We agree with the authors that such practice might take care of the SARS-CoV-2 load in dental aerosols. [1] But saliva secretion occurs continuously in the oral cavity. In fact, dental treatment is usually associated with increased salivation in the oral cavity due to stimulation of salivary glands by dental procedures. [4] This newly rushed saliva in the oral cavity harbors a fresh lot of viruses, which has the potential to contaminate the dental aerosols. Since salivary secretion occurs continuously during dental treatment, a doubt arises on the use of preprocedural mouth rinses as a modality of reducing SARS-CoV-2 load in dental aerosols.

If this proposition is true, then two practical remedies are possible to take care of the situation. First, the contaminated aerosols can be avoided by reducing the salivary flow rate during dental procedures. This can be achieved by giving pre-treatment drugs such as anticholinergics, which will reduce the salivary flow rate. The most commonly prescribed anticholinergic drugs include pirenzepine, solifenacin, atropine, and scopolamine butylbromide. [5] These will not only reduce the salivary flow but also decrease the nasal and respiratory secretions, thereby further reducing the chances of cross-infection. Secondly,

mouth rinse can be administered intra-operatively at regular intervals and should not be limited to only at the preprocedural level. We believe that these two recommendations will have a big impact on safety measures in dental practice in this difficult pandemic time.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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