

Research Compact

Tags

SARS-CoV-2, Oral cavity

Title

Virucidal efficacy of different oral rinses against SARS-CoV-2

Authors

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Source

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Aim of the study

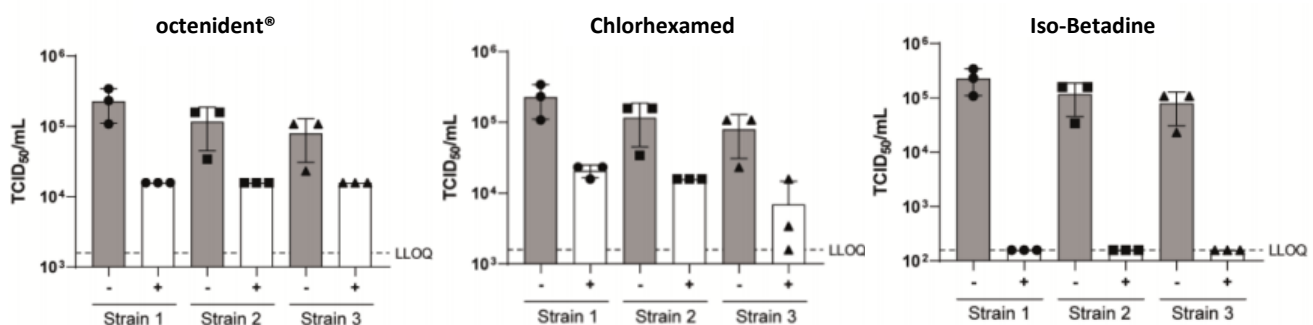
Recent studies identified the throat and salivary glands as significant sites for replication and transmission of the SARS-CoV-2 virus during early COVID-19 disease. Frequent mouth rinsing could therefore decrease the risk for infection. Efficacy of Oral rinsing and mouthwash solutions against the virus, however has not yet been examined.

Methods

SARS-CoV-2 virus strains were isolated from throat swabs or nasopharyngeal swabs of three different positively tested patients and replicated in Vero E6 cells. Viral titer of three stock solutions was determined for each strain and used for quantitative suspension tests with eight commercially available oral rinses. Organic load was added to the suspension in order to mimic respiratory secretions and the reaction time was 30 seconds. Oral rinses were based on octenidine (octenident®), chlorhexidine (Chlorhexamed forte), ethanol/essential oils (Listerine), polyhexanide (ProntOral), povidone-iodine (Iso-Betadine), dequalinium chloride (Dequonal) and others.

Results

The viral load was reduced by three orders of magnitude to background levels by Dequonal, Listerine and Iso-Betadine. A log reduction factor between 0.3 and 1.78 was observed with the other products. With the octenidine-based formulation octenident® log reduction factors of up to 1.11 were observed



Conclusion

The study shows that different commercially-available mouthrinses can efficiently inactivate the SARS-CoV-2 virus in-vitro.