

Research Compact

Title **Clinical effect of different commercially available antiseptic solutions on viral SARS-CoV-2 load in saliva**

Sources Smeets et al., 2021; Seneviratne et al., 2020; Yoon et al., 2020; Lamas et al., 2020; Gottsauner et al., 2020 – More details on request

Background The viral load of SARS-CoV-2 in the oral cavity plays a crucial role in disease transmission. Especially healthcare workers (HCW) are prone to exposition with the virus. Short-term reduction of the viral load in saliva could be a helpful measure to protect HCW from transmission. Even though in vitro results on this matter are promising, clinical evidence is still sparse.

Methods Publicly available clinical data on the effect of oral rinsing with Octenidine/Phenoxyethanol (octenisept®), Chlorhexidine (CHG), Povidone-Iodine (PVP), Cetylpyridinium chloride (CPC), Hydrogenperoxide or water on the viral load of SARS-CoV-2 in saliva were analyzed.

Results Hydrogenperoxide⁵ and CPC² did not induce a reduction of viral RNA in saliva at all tested time points. Oral rinses with CHG^{2,3} and PVP-Iodine^{2,4} caused no reduction of the viral load 5 minutes after rinsing, however were effective two hours post application. In contrast, octenisept® showed a total clearance of SARS-CoV-2 virus one minute after application. Virus RNA titres were still below baseline in 60% of subjects after 30 minutes. Additional data on the infectiosity of the remaining viral particles generated by randomized controlled trials is needed¹.

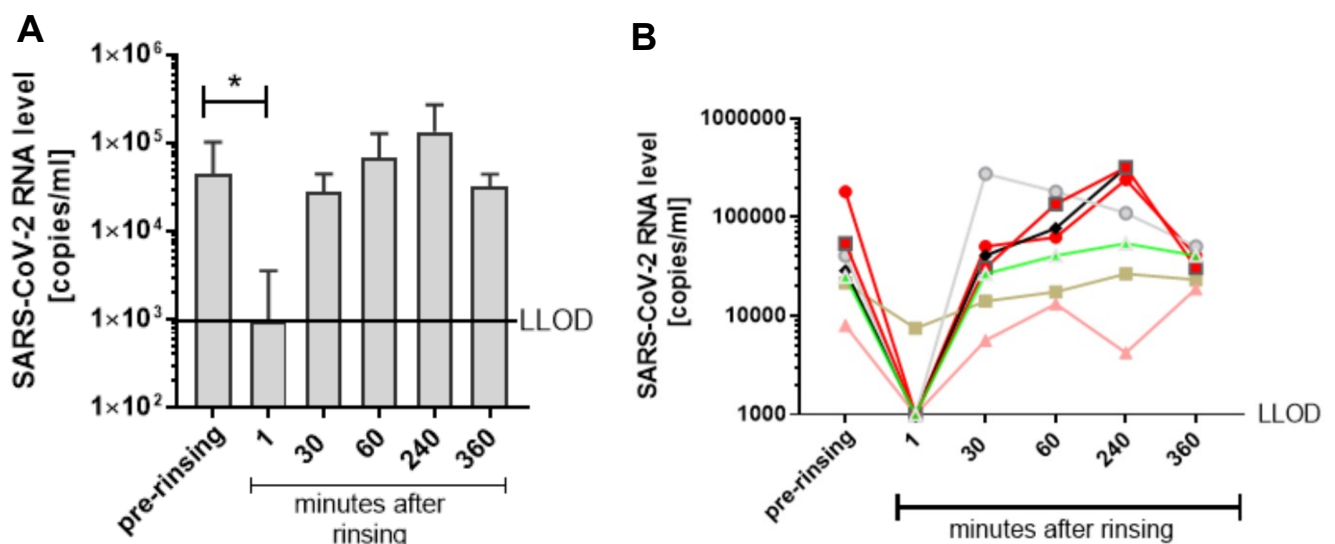


Figure 1A: Viral RNA load was measured pre-rinsing and 1, 30, 60, 240 and 360 minutes after rinsing with octenisept®. * = p<0.05. **B:** Time course of individual viral RNA levels. One minute after oral rinsing with 20 mL octenisept® the detectable RNA was completely diminished in 7 out of 8 samples. Statistical analysis was performed using students t-test. LLOD = Lower Limit of Quantification. Smeets et al., 2021

Conclusion Initial clinical studies show that octenisept® is effective in temporarily reducing the SARS-CoV-2 viral load in saliva within a short period of time.

Research Compact

Sources

Smeets R, Pfefferle S, Lütgehetmann M, Pilot study: Oral rinsing with octenidine based solution leads to SARS-CoV-2 clearance in saliva, 2021, Preprint Therapoid, <https://therapoid.net/en/preprint/manuscript-33/>

Seneviratne CJ, Balan P, Ko KKK, Udawatte NS, Lai D, Ng DHL, Venkatachalam I, Lim KS, Ling ML, Oon L, Goh BT, Sim XYJ. Efficacy of commercial mouth-rinses on SARS-CoV-2 viral load in saliva: randomized control trial in Singapore. *Infection*. 2020 Dec 14:1–7. doi: 10.1007/s15010-020-01563-9. Epub ahead of print. PMID: 33315181; PMCID: PMC7734110. Yoon et al., 2020;

Lamas L, Diz Dios P, Pérez Rodríguez MT, Del Campo Pérez V, Cabrera Alvargonzalez JJ, López Domínguez AM, Fernandez Feijoo J, Diniz Freitas M, Limeres Posse J. Is povidone iodine mouthwash effective against SARS-CoV-2? First in vivo tests. *Oral Dis*. 2020 Jul 2:10.1111/odi.13526. doi: 10.1111/odi.13526. Epub ahead of print. PMID: 32615642; PMCID: PMC7362147. Gottsauner et al., 2020

Gottsauner MJ, Michaelides I, Schmidt B, Scholz KJ, Buchalla W, Widbiller M, Hitzenbichler F, Ettl T, Reichert TE, Bohr C, Vielsmeier V, Cieplik F. A prospective clinical pilot study on the effects of a hydrogen peroxide mouthrinse on the intraoral viral load of SARS-CoV-2. *Clin Oral Investig*. 2020 Oct;24(10):3707-3713. doi: 10.1007/s00784-020-03549-1. Epub 2020 Sep 2. PMID: 32876748; PMCID: PMC7464055.

Yoon JG, Yoon J, Song JY, Yoon SY, Lim CS, Seong H, Noh JY, Cheong HJ, Kim WJ. Clinical Significance of a High SARS-CoV-2 Viral Load in the Saliva. *J Korean Med Sci*. 2020 May 25;35(20):e195. doi: 10.3346/jkms.2020.35.e195. PMID: 32449329; PMCID: PMC7246183.

octenisept® • **Active substances:** octenidine dihydrochloride, phenoxyethanol (Ph.Eur.). **Composition:** 100 g solution contain: 0.1 g octenidine dihydrochloride, 2.0 g phenoxyethanol (Ph.Eur.). Other ingredients: cocamidopropylbetaine, sodium D gluconate, glycerol 85%, sodium chloride, sodium hydroxide, purified water. **Indications:** For repeated, short-term antiseptic treatment of mucous membranes and adjacent tissues prior to diagnostic and surgical procedures - in the anogenital region including the vagina, vulva and glans penis as well as prior to bladder catheterization - in the oral cavity. For short-term supporting therapy of interdigital mycotic infections and adjuvant antiseptic wound treatment. **Contraindications:** octenisept® may not be used in cases of hypersensitivity to any of the components of the preparation. octenisept® should not be used for rinsing the abdominal cavity (e.g. intra-operatively) or the bladder, nor the tympanic membrane. **Undesirable effects:** rare: burning, redness, itching and warmth at the application site, very rare: allergic contact reaction, e.g. temporary redness at the application site; frequency unknown: after lavage of deep wounds with a syringe, persistent edema, erythema and also tissue necrosis have been reported, in some cases requiring surgical revision. Rinsing of the oral cavity may cause a transitory bitter sensation. Revision 11/18

To prevent possible tissue injury, the product must not be injected into the deep tissue using a syringe. The product is intended for superficial use only (application by swab or spray pump).

Schülke & Mayr GmbH, 22840 Norderstedt, Germany, Tel. +49 40 52100-666, info@schuelke.com