

Povidone-iodine solution as SARS-CoV-2 prophylaxis for procedures of the upper aerodigestive tract

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Abstract

Background:The COVID-19 pandemic has raised concerns of inadvertent SARS-CoV-2 transmission to healthcare workers during routine procedures of the aerodigestive tract in asymptomatic COVID-19 patients. Current efforts to mitigate this risk focus on Personal Protective Equipment, including high-efficiency filtration as well as other measures. Because the reservoir for SARS-CoV-2 shedding is in the nasopharynx and nasal and oral cavities, the application of viricidal agents to these surfaces may reduce virus burden. Numerous studies have confirmed that povidone-iodine inactivates many common respiratory viruses, including SARS-CoV-1. Povidone-iodine also has good profile for mucosal tolerance. Thus, we propose a prophylactic treatment protocol for the application of topical povidone-iodine to the upper aerodigestive tract. **Conclusion:**Such an approach represents a low-cost, low-morbidity measure that may reduce the risks associated with aerosol-generating procedures performed commonly in otorhinolaryngology operating rooms

Povidone-Iodine Solution as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Prophylaxis

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[International Journal of Science and Research \(2020\) 9:11](#)

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a highly transmissible and pathogenic coronavirus that emerged in late 2019 and has caused a pandemic of acute respiratory disease, named 'coronavirus disease 2019' (COVID-19), which threatens human health and public safety. The COVID-19 pandemic has raised concerns of inadvertent SARS-CoV-2 transmission to healthcare providers during routine procedures of the aerodigestive tract in asymptomatic COVID-19 patients. The oral cavity, an

essential part of the upper aerodigestive tract and the mucosa of the upper and lower airways is believed to play an important role in the pathogenicity and transmission of SARS-CoV-2. Current efforts to mitigate this risk focus on Personal Protective Equipment, including high-efficiency filtration as well as other measures. Because the reservoir for SARS-CoV-2 shedding is in the nasopharynx and nasal and oral cavities, and a significant proportion of COVID-19 sufferers are asymptomatic, but shedding these viral particles, PVP-I has been shown to be a safe therapy when used as a mouthwash or taken nasally or used during ophthalmic surgeries. Numerous studies have confirmed that povidone-iodine inactivates many common respiratory viruses, including SARS-CoV-1. Povidone-iodine also has a good profile for mucosal tolerance. Thus, proposing a prophylactic treatment protocol for the application of topical povidone-iodine to the upper aerodigestive tract

A review of iodine toxicity reports

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Abstract

This article summarizes case reports, population studies, and experimental studies from the literature concerning adverse effects of exposure to iodine from the mid-1880s to 1988. Exposure to excessive iodine through foods, dietary supplements, topical medications, and/or iodinated contrast media has resulted in thyroiditis, goiter, hypothyroidism, hyperthyroidism, sensitivity reactions, or acute responses for some individuals. Reports of maternal iodine exposure during pregnancy or lactation affecting newborn or nursing infants are cited. Susceptibility to excess iodine is discussed as well as the relationship between dose and response. It is concluded that some individuals can tolerate very high levels of iodine with no apparent side effects and that iodine intakes less than or equal to 1.000 mg/day are probably safe for the majority of the population, but may cause adverse effects in some individuals. Determination of maximum tolerable levels of iodine intake will require human experimental studies at levels between 0.150 and 1.000 mg/day for normal subjects, subjects with autonomous thyroid tissue, and iodine-sensitive subjects