Nature publication reports that Ondine's nasal antimicrobial photodynamic disinfection therapy suppresses SARS-CoV-2 in COVID-19 patients

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- The Toronto-based research reports a decrease of viral infectivity of 90% of SARS-CoV-2 patient samples using Ondine's nasal antimicrobial photodynamic disinfection (aPDT), with 70% of patient samples completely inactivated from a single 5-minute treatment.
- The nose is the primary location for SARS-CoV-2 entry and it has a central role in transmission and disease severity.

The Journal of Nature / Scientific Reports has published a paper from the Sunnybrook Research Institute in Toronto reporting that nasal antimicrobial photodynamic disinfection therapy (aPDT) effectively inactivated SARS-CoV-2 in the nose of patients with COVID-19.[i]

The paper, "*Translational feasibility and efficacy of nasal photodynamic disinfection of SARS?CoV?2",* reports that 90% of patient samples showed decreased viral infectivity, with 70% showing no detectable virus after a single 5-minute treatment.

The Canadian research team commented, "These promising results indicate the potential of photodisinfection as a novel tool against COVID-19 and should lead to further studies. This treatment, which has been clinically validated in high-risk surgical cases, leading to significantly reduced surgical site infections, could be important not only against COVID-19 but also other viral and bacterial transmissible diseases."

The study was led by a group of leading researchers from Sunnybrook Research Institute, University Health Network in Toronto, the Faculty of Medicine at the University of Toronto, the Lunenfeld-Tanenbaum Research Institute at Mount Sinai Hospital, and the Roy Romanow Provincial Laboratory at the Saskatchewan Health Authority, Regina, Canada. The researchers used Ondine Biomedical's Steriwave™ nasal photodisinfection in the study.

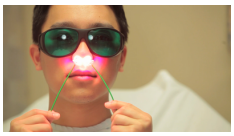
Carolyn Cross, CEO of Ondine, commented, "Nasal photodisinfection provides healthcare systems with a simple, rapid, cost-effective treatment to protect against COVID-19 as well as the bacterial co-factors that can complicate infections. We are delighted that this study led by Sunnybrook's Dr. Cari Whyne confirms that photodisinfection is effective against SARS-CoV-2 transmission and further suggests that photodisinfection may be effective against other viruses. As nasal photodisinfection therapy is already deployed in Canadian hospitals to prevent healthcare associated infections, we look forward to continuing our work to demonstrate photodisinfection efficacy against new viral strains and other emerging threats."

Dr. Nicolas Loebel, Ondine's President and Chief Technology Officer stated, "This new Sunnybrook data demonstrates that it is possible to reduce or eliminate upper respiratory virus infectivity with just a few minutes of painless nasal photodisinfection therapy. We believe it is now critically important to work together with Government agencies, healthcare systems and local hospitals to ensure that all patients and healthcare workers gain access to this simple, effective approach as an adjunct to vaccination, PPE, and other standards of care.

"As we move towards the fall, people will spend more time indoors and transmission of new COVID-19 variants will inevitably increase. The new Omicron variants such as BA.2.12.1, BA.4 and BA.5 are known as "super-spreaders" because they can escape the antibodies elicited by the original SARS2 infection and also by all current vaccines. This evasion permits rapid transmission between patients, and while patients do not get as sick as before, the potential to overload healthcare facilities this fall and winter, we believe, is very real. More importantly, co-infection between these new SARS-CoV-2 strains and other viruses (e.g. influenza, monkeypox, etc.) as well as bacteria can increase strain on a patient's immune system and cause still further mutations as the co-infected pathogens share genomic information between each other."

[i] https://www.nature.com/articles/s41598-022-18513-0.pdf

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