Short communication

Oxygen-ozone (O₃) immunoceutical therapy for patients with COVID-19. Preliminary evidence reported

Marianno Franzini¹,b, Luigi Valdenassi¹,b, Giovanni Ricevuti¹, Salvatore Chirumbolo¹,b, Markus Depfenhart¹, Dario Bertossi, Umberto Tirelli¹,b

¹ Department of Surgery, Dentistry, Paediatrics and Gynaecology Unit of Maxillo-Facial Surgery, University of Verona, Verona, Italy
² Department of Drug Science, University of Pavia, Italy
³ SIOOT, High School in Oxygen Ozone Therapy, University of Pavia, Italy
⁴ SIOOT INTERNATIONAL, Communian Clinic, Gorle Bergamo, Italy
⁵ Venel University B.V., Venlo, Netherlands

ABSTRACT

Objective: This study evaluated the potential efficacy of a novel approach to treat COVID-19 patients, using an oxygen-ozone (O₃) mixture, via a process called Oxygen-Ozone-Immuoceutical Therapy. The methodology met the criteria of a novel, promising approach to treat successfully elderly COVID-19 patients, particularly when hospitalized in intensive care units (ICUs). Experimental design: We investigated the therapeutic effect of 4 cycles of O₃ in 50 hospitalized COVID-19 subjects suffering from acute respiratory disease syndrome (ARDS), aged more than 60 years, all males and undergoing non invasive mechanical ventilation in ICUs. Results: Following O₃ treatment a significant improvement in inflammation and oxygenation indexes occurred rapidly and within the first 9 days after the treatment, despite the expected 14-20 days. A significant reduction of inflammatory and thromboembolic markers (CRP, IL-6, D-dimer) was observed. Furthermore, amelioration in the major respiratory indexes, such as respiratory and gas exchange markers (SatO₂, PaO₂, FiO₂ ratio), was reported. Conclusion: Our results show that O₃ treatment would be a promising therapy for COVID-19 patients. It leads patients to a fast recovery from ARDS via the improvement of major respiratory indexes and blood gas parameters, following a relatively short time of dispersed forced ventilation (about one to two weeks). This study may encourage the scientific community to further investigate and evaluate the proposed method for the treatment of COVID-19 patients.

1. Introduction

The "new" coronavirus, SARS-CoV-2, the causative pathogen of COVID-19, rapidly spread worldwide with a significant mortality rate [1]. According to the World Health Organization (WHO), SARS-CoV-2 is characterized by a 14-days incubation period and despite this interval it is typically reported for the previous SARS-CoV1, it is yet considered as the minimal window time where COVID-19 should initiate its symptoms. Millions of people under lockdown to face at the rapid SARS-CoV2 outbreak and to prevent further spreading of the disease by non-hospitalized and mainly asymptomatic people. In symptomatic COVID-19 patients an exacerbation of the disease, notably characterized by a systemic disorder of vascular physiology, pulmonary function and immunity, rapidly occurs [5,6].Evidence-based medicine has recently developed a promising bulk of therapeutic approaches against this disease and research worldwide against COVID-19 is increasing its efficacy. 

Keywords: COVID-19, Oxygen-ozone (O₃), Immunoceutical Therapy, Intensive Care Unit, ARDS, CRP, IL-6, D-dimer.