c. Clinical features, case management, outcome

Background

The emerging outbreak of the coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2 continues to spread worldwide. Such drugs as chloroquine, hydroxychloroquine, azithromycin, antivirals and immunomodulating agents were not confirmed as effective against SARS-CoV-2. We therefore started to use auto-hemotherapy treated with an oxygen/ozone (O3) gaseous mixture as adjuvant therapy.

Methods

In Udine University Hospital (Italy) we performed a case-control study involving hospitalized adult patients with confirmed COVID-19 with mild to moderate pneumonia. Clinical presentations are based upon clinical phenotypes identified by the Italian Society of Emergency and Urgency Medicine (SIMEU) and patients that met criteria of phenotypes 2 to 4 were treated with best available therapy used at the time (BAT), plus or not O3-autohemotherapy.

Results

A total of 60 patients were enrolled: we compared 30 patients treated with BAT and oxygen/ozone mixture as adjuvant therapy to 30 controls treated with BAT only. In the group treated with O3-autohemotherapy plus BAT, patients were younger, but with more severe clinical phenotypes. A decrease of SIMEU clinical phenotypes was observed (2.70 ± 0.67 vs 2.35 ± 0.88, p=0.002) in overall patients during hospitalization but this clinical improvement was statistically significant in O3-treated patients (2.87 ± 0.78 vs 2.27 ± 0.83, p<0.001), differently to the control group (2.53 ± 0.51 vs 2.43 ± 0.93, p=0.522). Figure 1 shows the clinical improvement in the two groups, in ozone group there was a 53% of improvement with respect to 33% in control group. In the group treated with Oxygen/ozone therapy as adjuvant therapy, only 7% of patients had a worse outcome, compared with 17% in the control group. Figure 2 shows all the 30 patients treated with O3-AHT as adjuvant therapy to BAT, according to the improvement of SIMEU clinical phenotypes and the time of Oxygen/ozone therapy. Four patients (two for each group) were intubated, and only two patients died in the control group. No adverse events were registered with the application of oxygen/ozone gaseous mixture.

Conclusions

Oxygen/ozone therapy as adjuvant therapy could be useful in mild to moderate pneumonia due to SARS-CoV-2. Randomized prospective study is ongoing [ClinicalTrials.gov ID: Z7C2CA5837].

Conflict of interest

Funding Sources: No financial support was received. Disclosures: C.T. has received funds for speaking at symposia organized on behalf of Pfizer, Novartis, Merck, Angelini, Zambon, Thermofischer, Biotest, Gilead, Hikma, Biomerieux and Astellas. All other authors: None.