Category :**Respiratory: mechanical ventilation**

A26 - ***Hyperbaric oxygen therapy in patients with covid-19***

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Introduction:

The research in COVID-19 is focused on finding methods aimed not only at eliminating hypoxia - one of the main complications of COVID-19, but also capable of reducing the risk of transferring a patient to mechanical ventilation. A combination of these characteristics is possessed by hyperbaric oxygenation (HBO).

Methods:

We examined 60 patients diagnosed with a new coronavirus infection caused by the SARS-CoV-2 virus. The control group consisted of 30 patients (13 men, 17 women, 64.5±12.7 y.o.), study group — 30 patients undergoing HBO (14 men, 16 women, 61.5±14.5 y.o.). HBO sessions were carried out in a Sechrist 2800 machine (USA) in the 1.4-1.6 ATA mode for 40-60 min. In total patients received 153 HBO sessions (5.1±2.5 sessions per patient).

Results:

Depending on the severity of the condition SpO2 values could reach 95% after 1-2 sessions in moderately severe patients and after 5-6 sessions in patients in severe condition. This circumstance made it possible in most cases to refuse additional oxygen therapy during the HBO course or within 1–2 days after its completion (Fig. 1). In no cases it was necessary to put patient to mechanical ventilation. In addition, against the background of HBO, the normalization of the redox state (malonic dialdehyde concentration, blood serum total antioxidant activity, platinum electrode open circuit potential in blood serum) was noted [4]. There was a significant difference in the NEWS2 scale: 4.7±2.3 and 4.0±2.3 points on days 4 and 10 in the control group, 4.3±2.2 and 1.2±1.7 points before and after the HBO course in the study group.

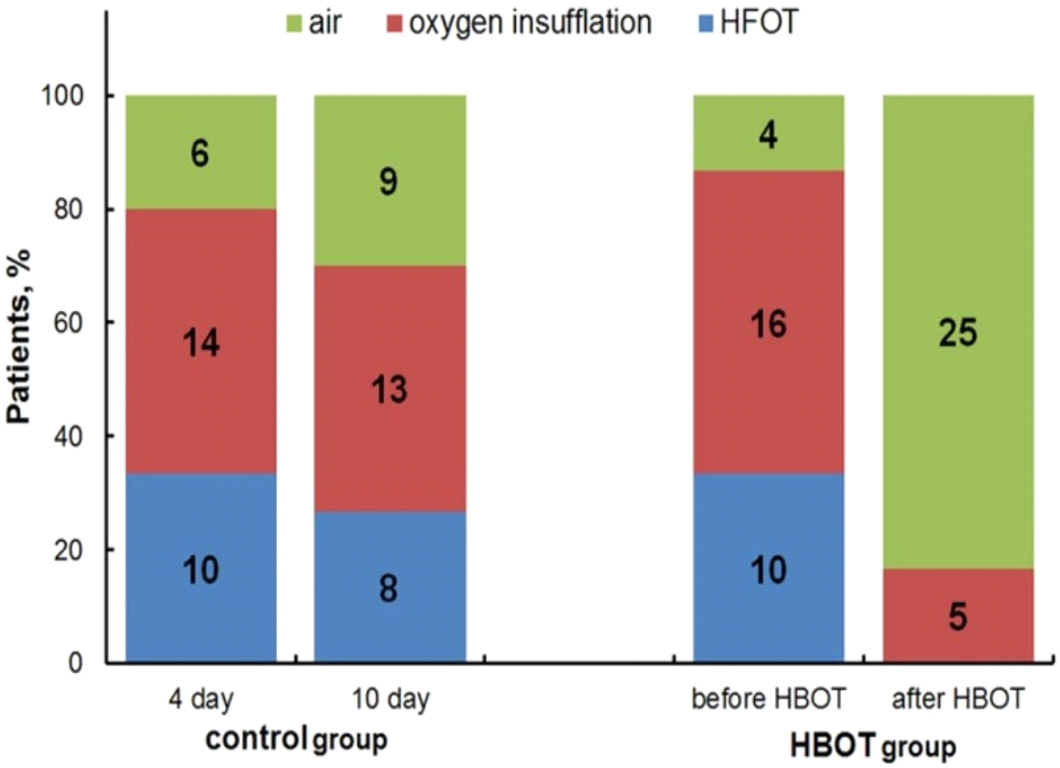
Conclusion:

HBO can be an important addition to the complex treatment in patients with COVID-19 by eliminating hypoxia, reducing the risk of switching to mechanical ventilation and significantly improving patient condition.

References:

1. Guo D. et al. UHM 47(2):181–187, 2020
2. Thibodeaux K. et al. J Wound Care. 29(Sup5a):S4–S8, 2020
3. Gorenstein S.A. et al. UHM 47(3):405-413, 2020
4. Petrikov S.S.et al. General Reanimatology 16(6):4-18, 2020

Image :



Need for oxygen support in patients with COVID-19. Oxygen insufflation - 3-6 l / min, HFOT (high flow oxygen therapy) - up to 60 l / min.