

Recommendations for treatment protocol of hyperbaric oxygenation in COVID-19

Indication of treatment:

Suspect or confirmed COVID-19 patient with sO₂ saturation \leq 90%, with signs of hypoxemia or pulmonary hypoxia.

Contraindications:

Patients presenting respiratory distress, pulmonary shock, emphysema, air cysts or bullae, untreated pneumothorax, severe chronic obstructive pulmonary disease (COPD III or IV)

Treatment protocol:

The treatment will be carried out with Revitalair 430 hyperbaric chamber (1.45 ATA) and an oxygen supplement close to 100% O₂, sessions of 120 minutes, once per day.

It is recommended to follow WHO preventive measures as well as the indications by the manufacturer in terms of cleanliness and waiting time between patient sessions. If it is possible, add a disinfectant with quaternary ammonium salts (for example *Lysoform*).

The patient and operator must have all the personal protection and isolation equipment when moving the room to the place where they will receive the treatment.

Daily evaluation of oxygen saturation. If possible, pulmonary tomography, pulmonary ultrasound, clinical and laboratory evaluation to evaluate response to treatment after the 5th session.

Expected results:

An improvement in oxygen saturation is expected from the first session. It is expected pulmonary hypoxia diminish, progression to pulmonary distress and requirement of mechanical ventilation decrease from 5th HBOT session.

Clinical evidence Source: <https://www.ihausa.org/covid19-hyperbaric-therapy/>:

Dr. Yianling promotes the use of HBOT as a treatment for critically ill patients with COVID-19, since it would generate greater efficiency in treatment, reduce pressure on health personnel and the risk of infection, and decrease the mortality rate of critic patients.

As evidence, he presents the successful treatment of 5 patients. 2 presented critical symptoms and 3 severe. It was observed:

1. Rapid relief of hypoxia symptoms: after the first session, dyspnea and chest pain were reduced. After the second session the respiratory rate decreased, and difficulty breathing eased more slowly.

2. Rapid correction of hypoxemia: A blood sample from each patient was analyzed at the beginning of the session. They all showed low oxygen saturation. At the end of the session, the low saturation was immediately reversed. From the 5th day of session, oxygen saturation was greater than 95% in all patients. At the end of the treatment, saturation was greater than 93%, and even arterial values recovered significantly (the report is attached).