

Oxygen-ozonotherapy is a Valuable Tool Especially If Used at an Early Stage of Disease

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"From our point of view, oxygen-ozonotherapy is a valuable tool the more useful it is in the early stages of illness".

This is what Dr. Luca Marziani, medical manager of the Complex Operating Unit of Anaesthesia, Resuscitation, Hyperbaric Oxygen Therapy and Antalgic Therapy of the Presidium Hospital of Vaio/Fidenza - ASL of Parma, says.

Dr. Luca Marziani was the contact person for oxygen-ozonotherapy treatments at the Vaio/Fidenza Hospital Presidium, as he is the one who performed the ozone therapy sessions and processed the data that were then sent to SIOOT (Scientific Society of Ozone Ozone Therapy).

"Orbisphera" interviewed him.

When did you get to know ozone therapy and what convinced you to use it to treat Covid-19 patients?

The relationship between this Hospital Presidium, in particular the Complex Anaesthesia and Resuscitation Unit, and the use of therapeutic oxygen is a story that is more than thirty years old. In fact, the first Hyperbaric Chamber of the Emilia Romagna Region was built in the then old hospital in Fidenza, which has now been extensively renovated and expanded and has been transferred to the current Presidium. Several thousand patients have been treated in it with the administration of high pressure oxygen to treat various types of pathologies, both acute and chronic.

For several years we have also known the benefits of mixing oxygen with ozone, so much so that in what is one of the activities managed by our UOC, i.e. Analgesic Therapy, this drug is commonly used by injection, especially with loco-regional administration (muscles, joints, etc.), mainly exploiting its anti-inflammatory, analgesic and immunomodulating properties.

In our hospital, until two months ago, we did not have the oxygen-ozone-generating device (used in other public hospitals in the Emilia Romagna Region, such as Piacenza, Fiorenzuola and Ravenna), but thanks to the farsightedness of SIOOT, which granted us the device on loan for free use, We thought to exploit the multiple properties of oxygen - and in particular, in this case, the oxygen-ozone mixture - to treat patients with Covid-19 pneumonia, since the use of Hyperbaric Oxygen Therapy was impractical

because oxygen administered by inhalation requires the anatomo-functional integrity of the lung, unfortunately absent in such patients.

When did you start using the SIOOT treatment protocol to treat Covid-19 positives? How many and which patients have you treated so far?

The first patient was treated on March 30. In total we have treated 11 patients to date. There have been 51 sessions of Grande AutoEmo Infusion (GAEI), which is the procedure recommended by the SIOOT protocols and which is carried out in the different centers that use this method, for an average of 5 sessions (precisely 4.6) for each patient. It ranges from a minimum of 1 single session (due to the death of the patient, treated at the beginning of our experience even if in serious conditions) to a maximum of 9 sessions for each patient.

10 of these 11 patients treated were in our Resuscitation Department due to serious respiratory problems related to Covid-19 and therefore underwent intubation and mechanical ventilation. Of these, 2 patients, already with very compromised conditions at the entrance, died after 1 and 2 GAEI sessions respectively.

Another 3 patients died during the months of March and April, while the other 5 had remission of the picture and discharge from Resuscitation; they are currently undergoing respiratory rehabilitation in hospital or in another contracted centre.

The last of the patients in chronological order, on the other hand, was "intercepted" in the Medical Operating Unit, before the worsening of his condition and the need for intensive care. This is due to a recent "change of course" in the strategy of choosing patients to undergo oxygen-ozonotherapy.

So what are your results? And why the "change of course" you mentioned?

It is precisely after the evaluation of the results of the first 10 patients that we decided, also considering what emerged from the experience of the other centres that use oxygen-ozonotherapy, to treat patients who present a worsening of their respiratory conditions (evaluated through the values of oxygen present in the arterial blood, the "quantity" of oxygen to be administered and some clinical parameters such as respiratory frequency) before the "derailment" of the system due to the exhaustion of the patient's "respiratory reserves", which then takes the patient to Resuscitation.

Without going into details that may be difficult to understand for most readers, we have seen that the use of oxygen-ozone does not change the mortality rate of patients admitted to the ICU but is all the more effective in improving the patient's condition the earlier it is used, i.e. before the "friendly fire" given by the abnormal immune response triggered by the viral infection significantly damages the lung itself.



In particular, we have seen in the patients treated a correspondence between clinical improvement, less "work" support required by the ventilator, less oxygen needed to maintain vital functions and variation of some tests, including increased concentration of lymphocytes in circulating blood - almost zeroed in the acute phase - and decreased values of Interleukin 6, one of the main proinflammatory cytokines, present in very high quantities in the blood of patients at the entrance.

And having verified the greater effectiveness that one has if the intervention with oxygen-ozone is done early, suggested the "change of course".

Based on your current experience, would you also advise others to use oxygen ozone to treat patients with Covid-19 respiratory complications?

In the literature, at present, there are no reliable data on this treatment related to Covid-19, but this basically applies to everything we have done so far to fight this pandemic: we have "borrowed" antiviral drugs used in the fight against HIV infection, antimalarial drugs, monoclonal antibodies used in rheumatoid arthritis and so on.

Certainly oxygen-ozonotherapy, from our point of view, is a valid tool, all the more useful the more it is used at an early stage of the disease. An example of this is the last patient treated who, although already in compromised conditions, had his first session while still in the OU of Medicine. It worsened during the night of the following day (in which - for technical reasons - it had not been possible to repeat the ozone therapy session), but intubation and subsequent mechanical ventilation immediately showed a clear improvement in ventilator indices and blood-chemical tests, therefore a diametrically opposite behaviour to the vast majority of intensive care patients, who normally see a clear worsening of the picture after the start of mechanical ventilation and require several days of use of the ventilator, often accompanied by the need for pronosupinations to maintain a minimum level of oxygen in the circulating blood.

This patient, before having to be transferred after 3 days for organisational reasons to another Intensive Care Unit in the region, was never pronated and had such conditions that he could attempt weaning off the ventilator and extubation after 4 days (compared to an average of 20 days).

Can you describe the history of any of the patients treated with oxygen-ozone?

This catastrophe has upset the existence of so many. But I am convinced that for those who "lived inside" us (and I am referring in particular to health workers) these events have irreversibly changed our lives: questions, sometimes unanswered, about the fragility of our existence, about suffering and pain, about time wasted for what does not matter, and not intensely lived for what really matters.

