Oxygen ozone therapy as integrated treatment of chronic obstructive pulmonary disease: a preliminary study

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Abstract

In this study we suggest the efficacy of major ozonated autohaemotherapy (OAHT) in patients affected by chronic obstructive pulmonary disease (COPD). 30 patients affected by moderate/ severe COPD were enrolled in two groups:

Group A (15 patients) underwent a cycle of OAHT associated with a standard therapy with inhaled beta2 long acting bronchodilators and/or corticosteroids twice a week for the first 5 weeks, thereafter a single treatment every week for other 10 weeks.

Group B (15 patients) served as control and not received treatments otherwise the standard therapy.

In all patients we measured before and after the end of the study: 1) Pulmonary FunctionTest 2)Resting Arterial blood gas 3) exercise tolerance by 6 min walking test (6MWT) 4) dyspnea index by Borg dyspnea scale 5) health status, evaluate by the St. George Respiratory questionnaire (SGRQ).

Major ozonated autohaemotherapy was carried with an O3 concentration of 20 micrograms/ml for the first four treatments, thereafter the concentration of ozone was 40 micrograms/mL of gas for the other 16 treatments.

In the group A there was
a significant increase in 6MWT (417.5 +/- 107.4 m before the study vs 493.8 +/- 106 m at the end of study, $p< 0.01$) and
a significant decrease in the degree of dyspnea measured by borg scale after the 6MWT (4.1 +/- 2.4 vs 3 +/- 2.1, $p<0.01$)
and in SGRQ activity impact and total scores.

In the COPD patients OAHT produces significant improvement in patient's quality of life and exercise tolerance. The integration of standard therapy with ozonetherapy in COPD can represent a novel and effective approach.