Study The Effect Of Ozone Therapy In Management Of Critical Cases With Ischemic Cardiomyopathy

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Background: Treatment of patients with coronary artery disease associated with myocardial dysfunction and heart failure manifestations represents a serious problem. These patients have high mortality and morbidity.

Aim of the work: Study the effect of ozone therapy on left ventricular function, functional capacity and effort tolerance in heart failure patients with ischemic cardiomyopathy.

Patients & Methods: This study was conducted on 20 patients with ischemic cardiomyopathy suffering from heart failure NYHA functional class III or IV and ejection fraction lesser than 35% and receiving the maximal conventional medical treatment without any change for at least one month before start of the study.

Every patient was given 10 sessions of ozone therapy, ozone therapy was given to 10 patients by Major Autohemotherapy (MAH) and the other 10 patients received it through rectal application by calculated doses.

All the previous assessment parameters were taken and measured just before and after the end of ozone therapy course over about 5 weeks.

Results: There was significant improvement in the Total Walking Distance, the Borg Dyspnea Score, the Borg Fatigue Score of the 6MWT, and Total, Physical and Emotional scores of the MLHFQ measured before and after the ozone treatment in the total population studied.

There was significant reduction in the E/E' ratio before and after the ozone therapy which means significant improvement in diastolic function in the total population studied.

There were no significant change in the left ventricular dimensions and volumes and left ventricular systolic function before and after the ozone treatment in the total population studied.

The same results were collected when comparing the 2 subgroups receiving ozone by MAH method and rectal application method; meaning that both methods of administration are having equal efficacy.

Conclusions:

1. Ozone therapy is, at all times, an additive (adjuvant or complementary) therapy, in combination with the other conventional methods of treatment.
2. Both Major Autoheamotherapy and rectal methods are equally effective in our study.
3. Ozone therapy can lead to marked improvement of the patients' symptoms and effort tolerance in cases of ischemic cardiomyopathy.
4. Ozone therapy can improve the LV diastolic functions.
5. Ozone therapy had no effect on the systolic function in our study. However, the encouraging results as regards the diastolic function and the patients' symptoms can raise some doubt that if more sessions were given, the systolic function might have shown some changes.