AUTOHEMOTHERAPY (AUTOLOGOUS BLOOD TRANSFUSION) OZONE THERAPY – AN UPDATE

Executive Summary

[Adapted from the report by MAHARITA AB RAHMAN]

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Introduction

Ozone (O_3) therapy was first discovered in Germany. Concentrated mixtures of ozone and oxygen that contain more than 20% of ozone can become explosive in both fluids and gases. The ozone is toxic for animals and humans, even at low concentrations. In gaseous state, the O_3 is toxic to the airways and to the lungs. There are various techniques for ozone therapy such as autohemotherapy (autologous blood transfusion), direct intra-arterial and intravenous injections, rectal insufflations, intramuscular injection, ozonised water, intra-articular injection, ozone bagging and ozonised oil. However, the safety and effectiveness of ozone therapy is controversial.

Although O_3 has dangerous effects, some researchers believed that O_3 had many therapeutic effects. Ozone therapy requires precise therapeutic level to make sure that the treatment works. Otherwise, the treatment will fail if the dose is too low or toxic if the dose is too high. However, previous systematic review by MaHTAS, ozone therapy as therapeutic options for various health conditions lacks sufficient safety and therapeutic advantage over available conventional therapeutic modalities. This update was requested following the widespread practice of ozone therapy in Malaysia

Objective/Aim

To assess the safety, efficacy or effectiveness of autohemotherapy (autologous blood transfusion) ozone therapy in the treatment of medical condition.

Results and Conclusions

There was no new high level of evidence retrieved to determine the effectiveness and safety of autohemotherapy (autologous blood transfusion) ozone therapy for cancer treatment, heart disease, stroke, hypercholesterolemia, AIDS and HIV infection. However, there was very limited evidence on autohemotherapy (autologous blood transfusion) ozone therapy for treatment of chronic limb ischaemia (CLI), hepatitis C (HCV) infection and neurological disorders. The results for CLI suggested better wound healing in the ozone group compared to control group (sterile saline). Similarly, a study reported that patient with HCV became seronegative. As for the neurological disorder, the study measured intermediate surrogate outcome. However, these studies were limited by small sample size, no blinding or having no comparator.

In terms of safety, a study reported high incidence of hepatitis infection in autohemotherapy. Actually the autohemotherapy (autologous blood transfusion) ozone therapy exposed patients to blood-borne diseases. Hence, more high quality evidence is needed to proof the safety and effectiveness of autohemotherapy (autologous blood transfusion) ozone therapy for treatment of medical conditions.

Methods

Electronic databases were searched through Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1948 to present, and Embase 1996 to 12 January 2017. Searches were also run in PubMed, Horizon Scanning databases, UM Library website, FDA website and INAHTA for published reports.

Search was limited to studies published within 2000s. Google and Google Scholar were also used to search for additional web-based materials and information about

the technology. Besides, additional articles were also search by reviewing the references of retrieval articles.