



Major Autohemotherapy (MAH) - IV Drip

What is Major Autohemotherapy IV?

Ozone is a gas consisting of three oxygen molecules in an unstable structure. It is the smell that often precedes or follows a summer rain. The gas was discovered in the mid-nineteenth century by Christian Schonbein who published *The Production of Ozone by Chemical Means*.

In the 1940's Kleinmann first demonstrated the bactericidal properties of ozone using the ozone generator constructed by Werner von Siemens who built the first technical ozone generator. Nikola Tesla built the first patented ozone generator in 1900. He made ozonated olive oil and sold it to doctors. E.A. Fisch, a German dentist practicing in the early to mid 1900s, first used ozone therapy. It has been in use in Europe since that time.

Many, many articles have been published about ozone therapy. Most of the research articles are in Russian, German, Italian, or French. The most extensive modern writing on the subject has been done by Velio Bucci, MD, who is an emeritus professor of the University of Siena, Italy. His book, *Oxygen-Ozone Therapy: A Critical Evaluation* is undoubtedly the most comprehensive publication available to explain the possibilities of the therapy. He has also published over a hundred articles for which the abstracts are available on Pub Med.

Mechanism of Action of Ozone

As it enters the blood, ozone dissolves and decomposes into reactive oxygen species—hydrogen peroxide, superoxide anion, and hydroxyl radical. These substances are all reactive and all have a short half-life. Since ROS have their own toxicity it is great that animals and humans have built in antioxidant systems and substances in the blood namely, uric acid, ascorbic acid, albumin, vitamin E and bilirubin as well as intracellular enzymes such as SOD, catalase, glutathione peroxidase, glutathione reductase, glutathione transferase.

The human system also has the redox system of glutathione, which includes in its regeneration system, the enzyme glucose 6-phosphate dehydrogenase.

Because of this, it would be contraindicated to use ozone therapy in anyone with a G6PD deficiency.

Hydrogen Peroxide is formed from the action of the ozone entering the blood and it enters the cells to perform several functions. In the RBC it shifts the hemoglobin dissociation curve to the right to facilitate the release of oxygen. Leucocytes and endothelial cells are induced to produce interleukins, interferon, TGF, and nitrogen oxide. Platelets are induced to release growth factors, and all cells are made stronger through the need to stimulate the efficiency of their antioxidant systems. Another effect likely is the activation of endogenous stem cells.

Ozone Uses

Ozone therapy has applications when used rectally, vaginally, topically, or intravenously. MAH is the common method and is administered intravenously. Blood is withdrawn from the patient and is infused with ozone before re-injection. The IV bag contains equal parts blood, normal saline, and ozone gas. MAH has powerful immune effects and stimulates the production of white blood cells. It can be used to treat a wide array of conditions including viral, fungal, bacterial infections, autoimmune conditions, heart & circulatory disease, lung disorders, arthritis, cancer and HIV.

Uses

- Nutrient Depletion
- Fibromyalgia & Chronic Fatigue
- Lyme Disease
- Chronic Infection (Bacterial, Viral, Fungal, HIV, CMV, EBV, HSV)
- Autoimmune Disease (MS, Rheumatoid ARthritis, SLE, etc.)
- Cancer
- Heart & Circulatory Disease



Major Autohemotherapy (MAH) - IV Drip

Ingredients

- Patient's Whole Blood
- Normal Saline
- Ozone gas
- Calcium Stock
- Heparin

Side Effects

Common

- Increased bleeding time due to heparin (half life of heparin is 1.5 hrs)
- Irritation or bruising at IV access site

Rare

- Hemolysis if G6PD deficiency
- Detox reactions: headache, body ache

Procedure

MAH is performed by extracting blood and infusing ozone to the normal saline bag, which is then returned back into the body through the same vein it was removed from.

Duration

60-90 minutes

Patient Prep

- 1st Lab appointment for blood test (30-45mins duration):

Blood draw for G6PD with complimentary MAH (ozone) at low dose (50mL).

*The MAH (ozone) treatment involves Heparin (blood thinner).

*RESULTS will be available in 7-14 business days, and the G6PD result is required for the next lab appointment.

- 2nd Lab appointment (60-90mins duration):

MAH 100mL to 250mL (depending on Doctor's Order) must have a normal G6PD to proceed with this higher dose.

*For patient with previous normal G6PD results and who had done MAH or UVMAH, they do not need to re-test for G6PD.

Please ensure that you have eaten a meal and are well hydrated prior to the treatment. Avoid any alcoholic or caffeinated drinks (coffee, tea, or soda).

Please inform a lab technician and/or your doctor if you have any allergies; have a history of any reaction to intravenous treatment or have any concerns regarding this treatment.

Please consult with your ND if your condition persists or worsens.

If you have any questions or concerns, please contact us at (604)738-1012, ext.1 or email reception@integrative.ca at least 48hrs prior to your lab appointment.

Notes
