

Ozone in Medicine: Low Dose Concept and the Classical Ozone Indications. Guidelines and Treatment Strategies

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The Indications

Inflammatory processes as the classical indications for systemically administered medical ozone have one general phenomenon in common: oxidative dys-stress, mostly chronic oxidative dys-stress: chronic vascular inflammation, diabetic angiopathia, pain syndrome, rheumatoid arthritis, age related diseases, and - last but not least - cancer, initiated and maintained by an excess of oxygen radicals (superoxide radicals $\cdot\text{O-O}^-$, hydrogenperoxide H_2O_2 , $\cdot\text{OH}$ -radicals..).

As one of the consequences, the downregulated and/or insufficient cellular antioxidant system (superoxide dismutase (SOD), catalase (CAT) and others) supports chronic inflammations.

The Rationale

Ozone, being a strong oxidant itself, interrupts this vicious circle via formation of „ozone peroxides“, reduction by cysteine residues and/or glutathion (GSH), -bypassing SOD and CAT consumption- signal transduction and regulation through Nrf2 (antioxidants) and NFkB (immunoregulation). These seem to be the central mechanisms to understand pharmacological and therapeutical effects of ozone.

As a consequence pathological concentrations of stress-relevant parameters (H_2O_2 , MDA malone dialdehyde, TH total hydroperoxide...) decrease significantly following systemic ozone treatment (low-dose concept), cellular antioxidants are regulated as well as the cytokin production (such as IL-1, IL-6, $\text{TNF-}\alpha$...) in chronic inflammatory processes.

The Applications

The following systemic and topical forms of application will be shown and discussed in the workshop:

Systemic Application

Major auto hemotherapy MAH as extracorporeal treatment and reinfusion

The microbubble system in major ozone-auto hemotherapy as extracorporeal blood treatment provides best ozone diffusion and optimizes the reaction with blood components. Doses and treatment strategies are discussed in these indications: angiopathia, rheumatoid arthritis as chronic inflammatory disease, chronic hepatitis, and as a complementary in oncology.

Rectal O₃/O₂ gas insufflation

Indications same as for Major Auto-Haemotherapy MAH, especially in chronic forms of hepatitis, chronic intestinal conditions such as colitis and proctitis.

Topic injection techniques

Minor auto hemotherapy

with ozone-resistant, siliconized disposable syringes and bacterial filters (0.2 µm) Indications: Pain therapy, gonarthrosis, trigger points, and herniated disk etc. ...

Minor auto hemotherapy as intramuscular application for allergies, acne, unspecified immune activation.

Transcutaneous gasbath and/or Ozonied Water

Diabetic gangrene, badly healing wounds, all forms of dermatosis, fistulae and radiation damage. Aphthae, fungus infections, burns and infected wounds, fresh lesions following surgery.

Literature

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