

## **Therapeutic efficacy of ozone in patients with diabetic foot.**

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Oxidative stress is suggested to have an important role in the development of complications in diabetes. Because ozone therapy can activate the antioxidant system, influencing the level of glycemia and some markers of endothelial cell damage, the aim of this study was to investigate the therapeutic efficacy of ozone in the treatment of patients with type 2 diabetes and diabetic feet and to compare ozone with antibiotic therapy. A randomized controlled clinical trial was performed with 101 patients divided into two groups: one (n = 52) treated with ozone (local and rectal insufflation of the gas) and the other (n = 49) treated with topical and systemic antibiotics. The efficacy of the treatments was evaluated by comparing the glycemic index, the area and perimeter of the lesions and biochemical markers of oxidative stress and endothelial damage in both groups after 20 days of treatment. Ozone treatment improved glycemic control, prevented oxidative stress, normalized levels of organic peroxides, and activated superoxide dismutase. The pharmacodynamic effect of ozone in the treatment of patients with neuroinfectious diabetic foot can be ascribed to the possibility of it being a superoxide scavenger. Superoxide is considered a link between the four metabolic routes associated with diabetes pathology and its complications. Furthermore, the healing of the lesions improved, resulting in fewer amputations than in control group. There were no side effects. These results show that medical ozone treatment could be an alternative therapy in the treatment of diabetes and its complications.