

## OZONE THERAPY IN CHRONIC WOUND: CLINICAL CASE SERIES

8th WORLD OZONE THERAPY FEDERATION MEETING, 8ª edição, de 29/08/2024 a 31/08/2024  
ISBN dos Anais: 978-65-5465-111-0

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### RESUMO

Chronic lower limb wounds are defined as any discontinuity of the skin that needs a period to heal greater than three months. Origin may have causes: venous, arterial, neuropathy, bacterial, etc. Chronic wounds significantly burden the health system and negatively and progressively impact the lives of patients with them, reaching 3.33% of the population worldwide. Ozone therapy has been proposed as an adjuvant treatment for the treatment of chronic wounds, potentially acting on tissue healing, avoiding oxidative stress, and promoting bactericidal and fungicidal action. To report a series of clinical cases on the effects of using ozone therapy as an adjuvant in the healing process of chronic wounds in adult patients. This is a descriptive, exploratory case series study. The population of this study comprises adult patients seen in a clinical nursing office following outpatient treatment for the care and treatment of chronic wounds of the lower limbs. The patients were followed up, and the details of their cases were described from the first day until the complete healing of the wounds. The patients included in this study signed the Informed Consent Term confirming their agreement to participate, use images of their wounds and description of the evolution, and they are free to withdraw from participation at any time, without prejudice to their treatment, being thus excluded from the study. Three cases were described in this study with respective photos of patients with chronic wounds submitted to different types of treatment, without satisfactory evolution and without success. The advent of ozone therapy in the patients described favored tissue oxygenation and clinically contributed to better perfusion of granulation tissue and later neo-epithelialization. In all cases, even with wounds with different characteristics, as well as considering the particularity and comorbidities of each patient, the professional who conducted the treatment was able to perceive the reduction of the biofilm of the wounds, the reduction of the characteristics and improvement in the color and characteristics of the tissue, which may have been caused by the pro-oxidative therapy, improving oxygenation, promoting bactericidal action and positively favoring the healing process. There were no reports of pain, discomfort, or any other interference during the topical use of Ozone in the Bag. International systematic reviews have pointed to significant improvement in wound closure with the advent of ozone therapy, and compared with conventional care, ozone therapy, as an advanced wound care treatment, can improve the proportion of chronic wounds healed in a shorter amount of time. "Case series" studies do not provide information for comparison between treatments. However, they can be seen as the first link in a chain of evidence to be obtained. Thus, the purpose of carrying out this study is to serve as a basis for conducting more robust studies in Brazil, considering the particularities of our population, climate, and life habits. Ozone applied to skin lesions can favor the healing process, especially if associated with clinical care for qualified professionals with expertise in wound care. The present research also aims to contribute to the improvement of the clinical

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practice of nursing professionals, encouraging the use of ozone therapy and inspiring further advancements in wound care.

**PALAVRAS-CHAVE:** Ozone\* / therapeutic use, CRONIC WOUND, HEALING PROCESS