

The Effect of Ozone Therapy on Re-epithelialization in Diabetic Foot Ulcers

Editorial Letter

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Letter

Dear Editor,

Diabetic foot ulcers remain a significant cause of morbidity worldwide, often leading to prolonged hospitalization, increased healthcare costs, and the risk of amputation. Impaired wound healing in diabetes is closely associated with microvascular dysfunction, neuropathy, and inflammation. Therefore, adjunctive therapies that enhance wound healing are of considerable clinical interest (1).

Ozone therapy has emerged as a potential supportive treatment modality owing to its antimicrobial, immunomodulatory, and oxygenation-enhancing properties. Several studies have suggested that ozone may improve local tissue oxygenation, stimulate angiogenesis, and promote the release of growth factors, all of which are critical in the wound healing cascade (2-4).

Re-epithelialization is a key phase of wound healing that involves keratinocyte proliferation and migration. This process is often delayed in diabetic wounds. Ozone therapy is hypothesized to accelerate re-epithelialization by improving oxidative metabolism and reducing the bacterial load in the wound environment. Additionally, its potential role in modulating inflammatory

cytokines may further contribute to tissue regeneration in the skin (5).

Although preliminary findings are promising, the current literature is still limited by small sample sizes and heterogeneity in the treatment protocols. Well-designed randomized controlled trials are needed to better elucidate the efficacy, optimal dosing, and safety profile of ozone therapy in the management of diabetic foot ulcers.

In conclusion, ozone therapy may represent a valuable adjunct in enhancing re-epithelialization in diabetic foot ulcers; however, further high-quality evidence is required before routine clinical use can be recommended.

Sincerely,

Acknowledge

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