Hiba Shreiki

Tishreen university
Syria

Successful healing of chronic venous ulcer using zinc oxide nanoparticles and compression therapy in a 75-year-old Syrian female: a case report

Abstract:

Introduction: Chronic venous disease is a commonly underdiagnosed condition that gradually diminishes a patient's quality of life and imposes a growing burden on healthcare resources. Venous leg ulcers (VLUs) arise as a complication of chronic venous insufficiency and represent the most prevalent type of slow-healing wound in the lower extremities.

Case presentation: In this case report, we present the successful treatment of a 75-year-old woman with a chronic venous ulcer caused by chronic deep venous insufficiency. The patient had been struggling with an unresponsive venous leg ulcer for 7 years with no improvement from previous treatments. A three-layer Unna boot treatment, including (ZnO NPs) and a two-component compression system was applied, and significant ulcer reduction was observed.

Discussion: ZnO NPs impregnated bandages, like those found in an Unna boot, offer compression by wrapping gauze dressing impregnated with ZnO NPs around the patient's leg forming a semi-solid mold around the extremity. A more efficient treatment approach could lead to fewer clinic visits, thereby reducing healthcare expenses by enhancing the method of managing venous ulcers through a combination of compression and simple, cost-effective surface dressing materials. It's worth noting that ZnO NPs have demonstrated significant benefits for wound healing.

Conclusion: Utilizing ZnO NPs alongside compression therapy has proven highly effective, accelerating healing and offering a cost-effective solution. Further research is needed to study the safety of ZnO NPs.

Biography

Hiba Shreiki has a Bachelor's degree in Pharmacy and Pharmaceutical Chemistry from Latakia University, Syria. Her research interests focus on environmental health, public health, and developing effective solutions in conflict-affected areas. She has experience working as a medical representative for international companies in Syria, which enriched her understanding of healthcare challenges in complex settings. She has published research on nanotechnology and public health, and she is currently engaged in research projects aimed at improving public health education.