

A Comprehensive Review of Topical Odor-Controlling Treatment Options for Chronic Wounds: A Comprehensive Review

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Abstract

The process of wound healing is often accompanied by bacterial infection or critical colonization, resulting in protracted inflammation, delayed reepithelization, and production of pungent odors. The malodor produced by these wounds may lower health-related quality of life and produce psychological discomfort and social isolation. Current management focuses on reducing bacterial activity within the wound site and absorbing malodorous gases. For example, charcoal-based materials have been incorporated into dressing for direct adsorption of the responsible gases. In addition, multiple topical agents, including silver, iodine, honey, sugar, and essential oils, have been suggested for incorporation into dressings in an attempt to control the underlying bacterial infection. This review describes options for controlling malodor in chronic wounds, the benefits and drawbacks of each topical agent, and their mode of action. We also discuss the use of subjective odor evaluation techniques to assess the efficacy of odor-controlling therapies. The perspectives of employing novel biomaterials and technologies for wound odor management are also presented. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially.

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