

Comprehensive Review of Wound Dressings for Ulcers: Challenges and Opportunities in Advance Healing Technologies

Authors : Anjali Sharma, Vinay Kumar Midha

Abstract : In addition to outlining the substantial potential for developing wound care technologies and enhancing the prognosis of patients with chronic ulcers, this review paper attempts to examine the complex issues surrounding bioactive wound dressings. This review examines the state of wound dressings today, highlighting the potential and problems brought about by cutting-edge healing technology. Because of issues like infection, tissue viability, and patient-specific concerns, treating ulcers remains a challenging clinical problem, even with major breakthroughs in materials and procedures. The mechanisms of action, effectiveness, and patient outcomes of several dressing types—such as hydrocolloids, hydrogels, foams, and biological dressings—are evaluated in this review. It also highlights the need for creative solutions that make use of technologies like nanotechnology, smart materials, and biotechnology by pointing out research and development gaps. This review attempts to offer insights that help direct future developments in wound dressing technology, ultimately enhancing healing results and the quality of life for impacted patients by addressing the complex problems in ulcer treatment and investigating new prospects.

Keywords : ulcer, dressings, nanotechnology, bioengineering

Conference Title : ICTE 2025 : International Conference on Textile Engineering

Conference Location : New Delhi, India

Conference Dates : February 24-25, 2025