ى مقالە:	عنواز
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Smart Wound Dressings: Revolutionizing Wound Care Through Advanced Technologies

محل انتشار:

دهمین کنگره بین المللی زخم و ترمیم بافت (سال: 1402)

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خلاصه مقاله:

Introduction: Smart wound dressings have shown promise in chronic wound care, such as diabetic ulcers and pressure sores, by preventing the formation of new ulcers and improving patient adherence to care regimens. Integrating smart wound dressings into telehealth systems allows for remote monitoring and guidance, reducing the need for frequent clinic visits and improving patient quality of life. Healthcare providers can access wound data remotely, enabling timely adjustments to treatment plans and potentially lowering healthcare costs. However, challenges such as affordability, accessibility, standardizing protocols, and data security need to be addressed. Collaborative efforts between researchers, clinicians, and industry stakeholders are crucial to fully harness the potential of smart wound dressings and bring them to the forefront of wound care. Methods: In this review, PubMed, ISI Web of Science, Google scholar and SCOPUS databases were searched for studies published up to September Y·Yr related to "Smart Wound Dressings: Revolutionizing Wound Care through Advanced Technologies" were addressed. Results: The review of studies shows that Smart wound dressings are equipped with sensors and materials that can detect various wound parameters, such as temperature, pH, moisture levels, and infection. In addition to monitoring, smart wound dressings are designed to actively interact with the wound environment. Many incorporate drug delivery systems that can release therapeutic agents, such as antibiotics, growth factors, or pain relievers, in response to specific wound conditions. This targeted drug delivery ensures that the wound receives the necessary treatment at the right time, minimizing the risk of systemic side effects associated with traditional oral or intravenous medications. Conclusions: smart wound dressings represent a transformative approach to wound care, offering real-time monitoring, targeted drug delivery, and enhanced patient engagement. These dressings have the potential to improve the quality of care for patients with acute and chronic wounds while reducing healthcare costs. As the field continues to advance, it is crucial to address the existing challenges and collaborate across disciplines to bring these innovative technologies to .the forefront of wound care

كلمات كليدى:

Smart wound dressings, Revolutionizing wound care, Tissue engineering

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