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A Prospective Multicenter Randomized Controlled Trial to Evaluate the Efficacy of Chitosan Hydrogel Paste in Comparison to Commercial Hydroactive Gel as a Wound Bed Preparation

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Abstract

Background This clinical trial aimed to evaluate the clinical efficacy of chitosan derivative hydrogel paste (CDHP) as a wound bed preparation for wounds with cavities. **Methods** This study enrolled 287 patients, with 143 patients randomized into the CDHP group (treatment) and 144 patients randomized into the commercial hydroactive gel (CHG) group (control). The granulation tissue, necrotic tissue, patient comfort, clinical signs, symptoms, and patient convenience during the application and removal of the dressing were assessed. **Results** The study was completed by 111 and 105 patients from the treatment and control groups, respectively. Both groups showed an increasing mean percentage of wound granulation over time when the initial wound size and comorbidity were adjusted ($F(10,198) = 4.61$; $p < 0.001$), but no significant difference was found between the groups ($F(1,207) = 0.043$; $p = 0.953$). The adjusted mean percentage of necrotic tissue of both groups showed a significant decrease over time ($F(10,235) = 5.65$; $p < 0.001$), but no significant differences were found between the groups ($F(1,244) = 0.487$; $p = 0.486$). **Conclusion** CDHP is equivalent to CHG and is an alternative in wound management and wound bed preparation for wounds with cavities. © 2022. Association of Plastic Surgeons of India. All rights reserved.

Author keywords

cavity wounds; chitosan dressing; full-thickness wound; granulation

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