

Quantitative Evaluation of Diabetic Foot Wound Healing Using Hydrogel Nanosilver Based Dressing vs. Traditional Dressing: A Prospective Randomized Control Study

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Abstract : Background: Wound dressings perform a crucial role in cutaneous wound management due to their ability to protect wounds and promote dermal and epidermal tissue regeneration. Aim: To evaluate the effectiveness of using hydrogel/nano silver-based dressing vs. traditional dressing on diabetic foot wound healing. Methods: Sixty patients with type-2 diabetes hospitalized for diabetic foot wound treatment were recruited from selected Surgical departments. A prospective randomized control study was carried. Results: The results showed that the percentage of a reduction rate of the ulcer by the third week of the treatment in the hydrogel/nano silver-based dressing group was higher (15.11%) than in the traditional wound dressing group (33.44%). Moreover, the mean ulcer size "sq mm" in the hydrogel/nano silver-based dressing group recognized a faster healing rate (15.11 ± 7.89) and considerably lesser in comparison to the traditional in the third week (21.65 ± 8.4). Conclusion: The hydrogel/nanosilver-based dressing showed better results than traditional dressing in managing diabetic ulcer foot.

Keywords : diabetes, wound care, diabetic foot, wound dressing, hydrogel nanosilver

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