Combined Silver Alginate and Hydrocolloid Dressing Approach for a Large Infected Diabetic Foot Ulcer: A Case Report

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Background

Diabetic foot ulcer (DFU) presents a significant (remains a major) clinical challenge due to prolonged healing time, infection risk, and tissue deterioration. Effective wound bed preparation and maintaining peri-wound integrity are critical steps to facilitate granulation formation and epithelial advancement. This case report describes the management of a large full-thickness DFU in a 60-year-old male with uncontrolled type 2 diabetes. The wound measured approximately 15.0 × 6.0 cm with extensive slough, hypergranulation, heavy exudate, and clinical signs of local infection.

Methods

Following sharp debridement, a *silver alginate dressing* was selected to help reduce microbial burden and maintain appropriate moisture balance at the wound bed. A *hydrocolloid dressing* was applied to protect the peri-wound skin from maceration and and provide a stable environment that supports epithelial recovery. Dressing changes were performed three times per week in conjuntion with systemic glycemic management.

Results

Within three weeks of treatment, the wound showed a noticeable reduction in slough and odor, accompanied by healthier granulation tissue formation and improved peri-wound integrity. Early epithelial migration was evident at the wound margins, indicating progressive healing.

Conclusion

This case highlights the clinical value of using *silver alginate and hydrocolloid dressings* in combination for complex DFU management. The approach is consistent with wound care principles that emphasize microbial control, maintenance of peri-wound health, and support for epithelial advancement.

Case Study

Day 0

Day 29

Day 41

Day 45

Day 46

Day 50

Keywords

Silver Alginate, Hydrocolloid, Diabetic Foot Ulcer, Moisture Management, Epithelialization, Advanced Wound Dressing