Introduction

Diabetic foot ulcers (DFUs) are a major health issue because they may be associated with amputations and high healthcare system expenditures. Patients with diabetes mellitus are at high risk for DFUs due to neuropathy, ischemia, and autonomic neuropathy. These conditions lead to diabetic foot wounds, which can be associated with amputations and high healthcare system expenditures.

Holistic Care for DFUs

Wound healing can be improved by various treatments, but many factors need to be considered before proceeding with appropriate therapy selection. Patient education, early assessment, and aggressive treatment by a multidisciplinary team represent the best approach to managing high-risk diabetic patients. Examining the patient as a whole is important to evaluate and correct causes of tissue damage.

Conclusions

While some DFUs may be superficial and can heal with conservative treatment, many diabetic ulcers require advanced, modern wound care technologies to promote healing. Optimal treatment of DFUs is critical to determining further changes in the therapeutic approach and the ability to close the wound by primary intention, skin graft, or biological/heterologous tissue regeneration. The presence of granulation tissue is critical to determining further changes in the therapeutic approach and the ability to close the wound by primary intention, skin graft, or bioengineered autologous/heterologous tissues. C/ORC/Silver dressings, negative pressure wound therapy (NPWT), and epidermal skin grafts have been associated with improved wound healing and outcomes.

References

7. In V.C., Micceli M, et al. Preliminary evidence evaluating the use of epidermal skin grafts harvested with new automated system over DFUs is promising.

C/ORC/Silver Dressings for DFU Management

The use of C/ORC/Silver matrix dressings in managing DFUs is supported by RCTs. C/ORC/Silver dressings can be used to manage DFUs that have shown little change in size or in appearance of wound bed or edges. These dressings are generally recommended for ulcers that have failed to proceed through an orderly reparative process towards healing.

Use of NPWT in Treating DFUs

This new automated system over DFUs is promising. Case Study 1: A 70-year-old male presented with a non-healing DFU with hypergranulation on the first submetatarsal head. Multiple treatments, debridements, and antibiotic therapy had failed to heal the wound. C/ORC/Silver dressings were used for 3 weeks postoperative. Wound size was notably decreased.

Epidermal Skin Grafts to Treat DFUs

Epidermal skin grafts provide a viable option for DFU coverage that can be performed in an office or outpatient setting without anesthesia. Only the epidermal skin layer is removed at the donor site, resulting in minimal to no bleeding, minimal scarring, and little donor site pain. Heat and suction are applied concurrently to induce uniform, reproducible epidermal microdome formation and distribution. Preliminary evidence evaluating the use of epidermal skin grafts harvested with this new automated system over DFUs is promising.

Case Study 2: A 42-year-old male presented with a necrotic third digit along with necrosis tracking proximal to the dorsum of the right foot and ankle.

Case Study 3: A 65-year-old male with a history of peripheral vascular disease presented with a DFU on the dorsum right ankle that was caused by a complication from a previous surgery.

CONCLUSIONS

While some DFUs may be superficial and can heal with conservative treatment, many diabetic ulcers require advanced, modern wound care technologies to promote healing. Optimal treatment of DFUs is critical to determining further changes in the therapeutic approach and the ability to close the wound by primary intention, skin graft, or bioengineered autologous/heterologous tissues. C/ORC/Silver dressings, negative pressure wound therapy (NPWT), and epidermal skin grafts have been associated with improved wound healing and outcomes.

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