USE OF A COLLAGEN AND GLYCERINE-BASED GEL FOR HEALING OF DIABETIC FOOT ULCERS

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Introduction
Diabetic foot lesions are prevalent in Malaysia as the incidence of Diabetes Mellitus amongst the population is increasing tremendously. Currently 20% of the 28 million population of Malaysia are suffering from the disease and a quarter of this number have diabetic foot complications. Healing is slow and new therapies are needed to help accelerate the healing of these wounds.

Methodology
10 diabetic patients with foot ulcers which show poor healing were recruited in this case series. The TIME concept was used to assess the wounds. Wounds were in the inflammatory phase of wound healing and therefore there was a delay in wound epithelization. There was no clinical sign of infection and exudates were minimal. The wound bed was prepared by cleansing, debridement and dressing with offloading.

The wounds were cleansed with water for irrigation. Callus was debrided if present and treatment was initiated with the collagen and glycerin-based gel. Patients were seen every 48-72 hours for the next dressing change.

Case Study 1
8 week old Diabetic foot ulcer which resolved after 56 days of application of the gel.

Case Study 2
14 week old stagnant non healing ulcer which closed after 55 days with the collagen and glycerin based gel

Case Study 3
14 week old ulcer which was non healing and healed after 14 days

Case Study 4
14 week old neuropathic ulcer at the plantar aspect with callusy which closed in 35 days

Case Study 5
10 week old neuropathic ulcer with callusy started to close within 60 days

Case Study 6
4 year old chronic ulcer which started to close after 99 days of gel application

Case Study 7
2 year old ulcer with deformation which showed improvement within 126 days

Case Study 8
Diabetic foot ulcer with stitches closed within 13 days

Case Study 9
Wound post Motor Vehicle Accident which started to close after 22 days

Case Study 10
Post accident wound which closed after 42 days of treatment

Results
All the 10 cases showed marked improvement in terms of wound healing and the ulcers epithelialized and healed well. The collagen and glycerin based gel showed its efficacy in accelerating the healing of the stagnant non infected wounds.

Conclusion
This collagen and glycerin-based gel is effective in improving the clinical outcome of diabetic foot ulcers in terms of epithelization and healing. The collagen is effective in the fibroelastic phase of wound healing and helps in the healing of the chronic wounds. Wound healing is kick started with the collagen. Meanwhile, glycerin works as a cleanser to cleanse the wounds. The collagen and the glycerin work synergistically to improve the clinical endpoint of the cases.

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