

Using Becaplermin and an Ovine Dermal Template (ODT) Dressing to Heal Chronic Diabetic Foot Ulcers. A Case Series

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Introduction

Becaplermin PDGF has been widely used for the treatment of Diabetic Foot Ulcers (DFUs). (1) A new acellular collagen ovine tissue product has been made available as a dressing that can be ordered for patients for use on day one which when coupled with Becaplermin provides a potent stimulus to wound healing. (4,5) The increased availability and cost effectiveness of the products in combination may allow the clinicians to heal wounds faster. Products that can be initiated on an initial visit without the burden of insurance verification, a 4 week waiting period or denials often seen with tissue supplement products make this a valuable treatment option. Advanced products that can be used before and after restrictions placed on cell-based tissue products (CTPs) are a valuable addition to our healing choices.

Methods

Five diabetic patients seen at the foot and ankle institute with recalcitrant plantar ulcers were identified in the system and their charts reviewed. All patients had unresponsive DFUs who were started on Becaplermin and Ovine dermal template dressings in order to improve healing. Patient's DFU's were unresponsive to various off-loading devices and had not shown improvement with use of advanced wound care products such as topical antimicrobials, antiseptic impregnated foams, silver alginates, cadexomer iodine, etc. Photographs were analyzed along with chart records for wound area and volume during the course of their treatment. Rates of closure and time to healing were noted for each patient.

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Case 1

0.8 x 0.8 x 0.1 cm

Wound Closure



4/14/2015



6/3/2015

Case 3

1.0x1.0x0.0cm

Wound Closure



01/15/2015



2/12/2015

Case 2

1.0 x 0.9 x 0.2cm

Wound Closure



3/11/2015



5/27/2015

Case 4

2.3x2.9x0.2cm

Wound Closure



01/14/2015



7/8/2015

Results

Case	Area Before	Area After	Rate of Closure	Days	Weeks
1	0.64cm ²	0.0cm ²	0.01254 cm ² /days	51	7
2	0.9cm ²	0.0cm ²	0.01153 cm ² /days	78	11
3	0.8cm ²	0.0cm ²	0.02758 cm ² /days	29	4
4	6.67cm ²	0.06cm ²	0.03811 cm ² /days	175	25
5	3.0cm ²	0.0cm ²	0.05882 cm ² /days	51	7

All the patients had 100% closure of their DFUs with exception of case 4 which showed 0.06cm² area opening on day 175. The average rate of wound closure was 9% per week and all ulcers healed within 11 weeks. Average rate of wound closure for the patients was 0.0297 cm²/days.

Conclusion

Using Ovine Dermal template dressings in combination with Becaplermin gel has become a standard therapy at our institution for non healing DFUs prior to the initiation of CTP tissue supplements. Becaplermin and ODT can be prescribed or ordered on day one in difficult to heal patients or reserved for use after standard therapy has failed.

References

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