Preliminary Experience with a Novel Wound Healing Xenograft

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INTRODUCTION

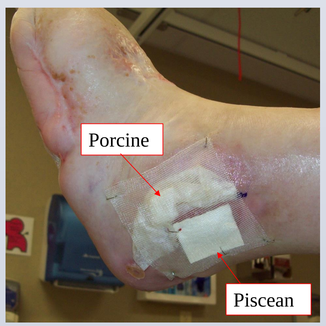
Healing diabetic wounds can be a complicated task, especially since the patients who develop these ulcers are typically unhealthy with many co-morbidities. There are currently a multitude of products on the market to help with wound healing. We present our preliminary findings in our ongoing case study with a new and unique piscean-based product for healing chronic wounds in a head-to-head comparison against a well-known porcine-derived xenograft.

CASE STUDY

73 year-old male PMH significant for DM2, CKD4, HTN, right BKA, s/p left AK pop-DP bypass with a chronic left lateral ankle wound >6 months in duration.

MATERIALS AND METHODS

Division of prodcuts



We first started by dividing our patient's wound in half, applying the Piscean-based product to the superior-posterior aspect of the wound base; the porcine-derived product is applied to the remaining wound bed. The wound products are secured in place with an oil emersion non-adherent dressing.

The outer layer of dressings (consisting of a small amount of wound gel, a hydrofiber dressing, and dry, sterile dressings) are changed on a daily basis, making sure to leave oil emersion dressing and both wound products intact. The patient is seen on a weekly basis and the wound reassessed.

RESULTS

Week	Overall Wound Size
0	5.0 x 4.0 cm
1	4.7 x 3.9 cm
2	5.0 x 4.0 cm
3	5.0 x 3.9 cm
4	4.8 x 3.5 cm
6	3.0 x 3.0 cm

With each week, we noticed an increase in granulation throughout both wound beds and an overall improvement in the wound appearance. However, there was no significant difference in in wound size between the two areas of the wounds where the different xenografts were applied.

CONCLUSIONS

Baldursson et al (1) found that wounds treated with the piscean xenograft healed significant faster than those treated with porcine-derived xenografts. They also found that the new product was comparable in terms of healing time with the porcine product, with 95% healed at the end of 4 weeks.

According to Sheehan et al. (2) found, we should expect a 50% reduction in wound size after 4 weeks of application of advance wound therapies. However, based on our weekly measurements, we did not see this size reduction after 4 consecutive weeks of application of either products. Moreover, there was little difference in the appearance of the wound bed where both products were applied though the piscean based product demonstrated slightly more vascularity.

Although the overall appearance of the wounds improved after weekly application of the two different xenografts and we did note improved granulation of the wound bed, we noted significant drainage from the wound during each weekly appointment and also equal amounts of irritation to the periwound areas.

From our preliminary findings this new piscean wound dressing is at least equivalent to existing xenograft materials. There is the added benefit of storage and use at room temperature over allograft and living tissues. Granulation and re-epithelializaion appears to occur sooner with the piscean product versus the porcine. Time will tell if this product provides improved wound care though it seems to.

REFERENCES

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