The Healing Power of Nature

Complete closure of complex diabetic ulcerations with solid and fragmented fish skin grafts* : A Case Series

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INTRODUCTION

Achieving complete closure for complex diabetic foot wounds is a challenge for the wound care practitioner. Complex wounds include those that have either significant infection, osteomyelitis, PVD, uncontrolled diabetes, significant comorbidities or a combination of these issues. Utilizing intact fish skin grafts have supported healing progression and ultimately has led to complete closure in these difficult cases.

METHODS

A series of these complex diabetic patients is presented. The complex issues involved with each case is noted. The patients were grafted in the operating room and/or the wound center and measurements were taken prior to the first grafting and on a weekly basis until closure. Most patients required a series of grafts either weekly or every other week. The total time frame and number of grafts associated with each case is illustrated.

RESULTS

All of the cases presented showed incremental progression toward healing starting with the initial graft. Complete closure was achieved in all of the cases.

CONCLUSIONS

The intact fish skin grafts have shown to closely resemble human epithelium and are also minimally processed. As a result , this provides clinicians with an excellent product to support the healing of their wound patients. In this case series, we were able to cover hard-to-heal ulcerations and ultimately return our patients to their previous lives.

In the cases presented, despite complicating factors including either significant infection, osteomyelitis, PVD, uncontrolled diabetes, significant comorbidities, or a combination of these factors, complete closure was achieved in all cases.

REFERENCES

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CASE: COMPLEX DIABETIC FOOT ULCERS

Case 1

Wound History: s/p choparts amputation for chronic diabetic plantar ulceration present for over 15 years with osteomyelitis and PVD

Fish Skin Graft Applications: 5 applications of fragmented fish skin graft

Initial presentation pre-op prior to application of fragmented fish skin graft
Wound size: 8.2xm x 6.1cm

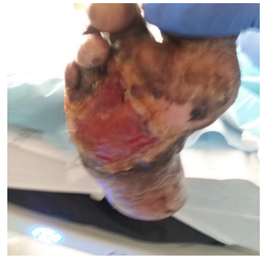
6 week follow-up: after initial application of fish skin

Dorsal and plantar views at 10 weeks after initial fish skin graft application
Wound achieved complete closure after five fragmented fish skin graft applications

Case 2

Wound History: Osteomyelitis lesser Mets and Plantar DM ulcer with wet gangrene. Pt underwent partial amputations of the right foot and BKA of the left

Fish Skin Graft Applications: 3 applications of solid fish skin grafts and 3 applications of fragmented fish skin grafts



Initial presentation – wet gangrene
Wound size: 7.4cm x 3.3cm prior to fish skin graft applications

2 month follow up following three applications of solid fish skin graft and three applications of fragmented fish skin graft

Final healing outcome

Case 3

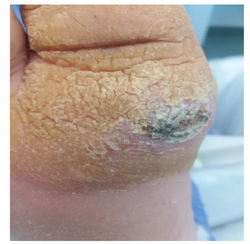
Wound History: Diabetic wound infection with cellulitis, septic joint, and osteomyelitis

Fish Skin Graft Applications: application of fragmented fish skin grafts

Initial presentation

2 weeks following initial debridement and IV antibiosis

Prior to fish skin graft application



Final healing outcome following three weekly applications of fragmented fish skin graft