The Healing Power of Nature

Fish skin grafts* are a valuable resource for challenging heel wounds: a case study

Amy Pate, MD, MPH, CWSP, Bridget Brauns MS, ANP, CWOCN, CFCS, Karen Rush, RN, BSN, Jacquelyn Glenn, MD, FACS, CWSP
Peak Surgical and Wound Care, Centennial, CO

INTRODUCTION

Pressure injuries of the heel are notoriously difficult to heal due to 1,2:

- Tenuous blood supply
- Minimal tissue thickness
- Prevalence of comorbidities in susceptible population

Our objective is to share our experience utilizing a single application of a fish skin graft* to heal a stage 3 posterior heel pressure injury in a patient with multiple comorbidities

METHODS

Single-case retrospective medical record review Data obtained:

- Patient demographics
- Factors contributing to delayed healing
- Wound dimensions
- Tissue characteristics
- Interventions performed
- Time to wound closure

CASE

Demographics: 75-year-old female

Referral reason: Stage 3 left posterior heel pressure injury

History of Present Illness

- Wound present for 5 months
- Developed at out-of-state rehabilitation facility
- Inpatient rehabilitation was necessary due to left ankle surgery after mechanical fall

Relevant Medical History

- Hypertension
- Hyperlipidemia
- Atrial fibrillation on warfarin
- Left-sided hemiparesis due to a cerebral infarction
- Left ankle fracture s/p operative fixation

Initial Assessment

- Wound dimensions: 1.2 x 1.2 x 0.2 cm (Fig. 1)
- Wound characteristics: 80% slough + biofilm
- Moderate periwound callus
- Pedal pulses palpable

Diagnostics

Non-invasive vascular assessment: normal

Interventions:

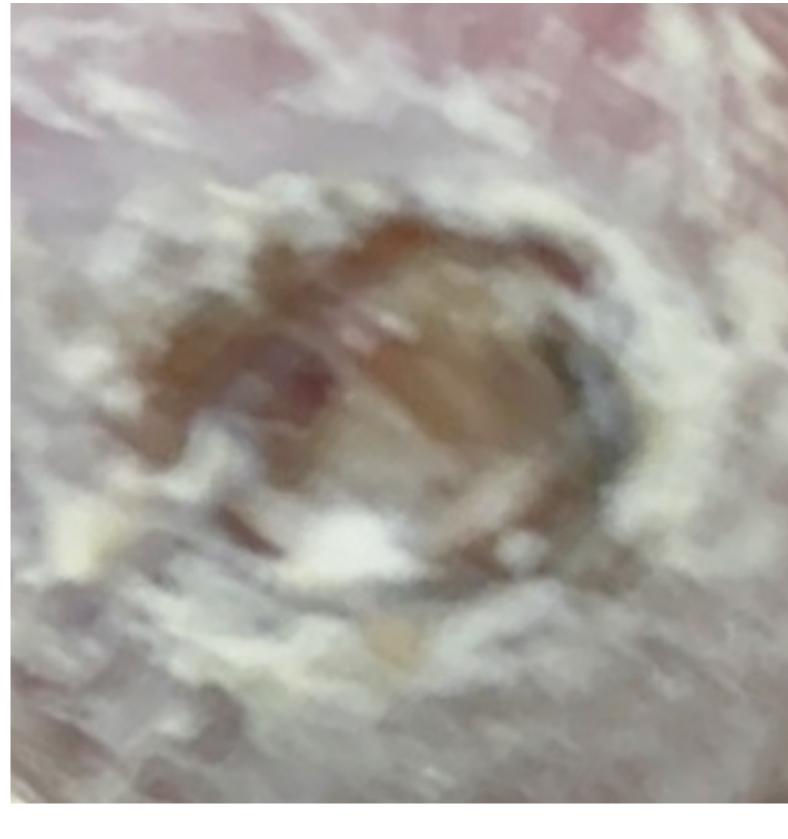
- Surgical debridement
- Offloading
- Moisture management
- Nutritional support
- Collagen application
- Fish skin graft* application



Initial Presentation
Dimensions: 1.2 x 1.2 x 0.2 cm



Week 3
Dimensions: 1.5 x 1.7 x 0.1 cm

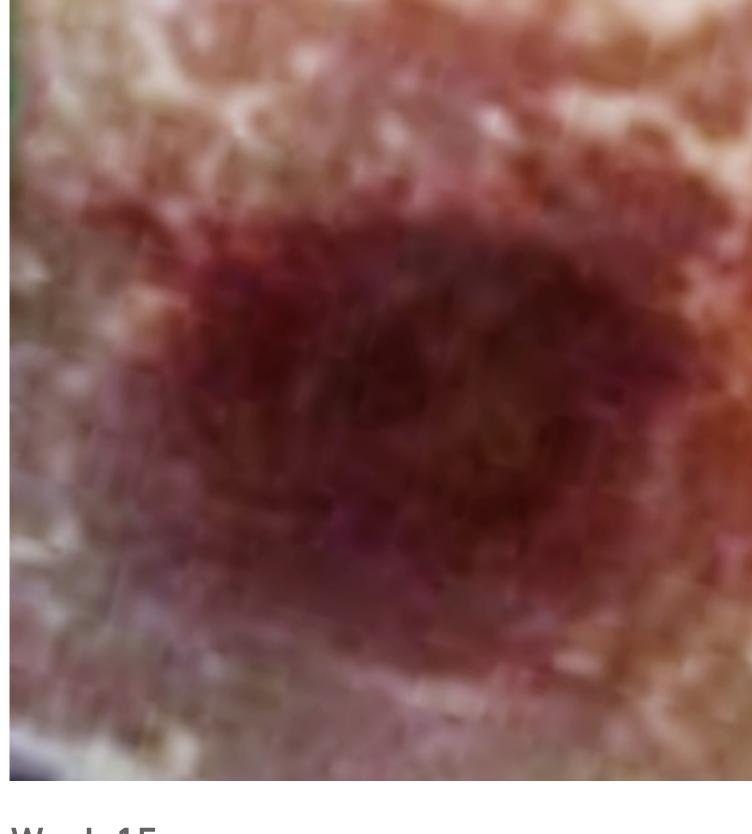


Week 7
Dimensions: 2.9 x 3.2 x 0.2 cm



Week 12
Dimensions: 0.9 x 0.8 x 0.2 cm

Wound Area/Volume Progress



Week 15
Dimensions: 2 x 1.8 x 0.4 cm



Week 17
Dimensions: 0.5 x 0.5 x 0.1 cm

CONCLUSION

RESULTS

(Fig. 1)

evidence

• Fish skin grafts* have been shown to heal wounds faster than dehydrated human amnion/chorion in healthy adult volunteers³

The patient underwent 3 weeks of standard wound care including

Collagen with silver was applied to the wound at weeks 4 and 5;

Infection was ruled out at time of regression due to lack of clinical

Standard treatment was resumed and an insurance authorization

At week 15, the wound measured 2 x 1.8 x 0.4 cm with 100% granulation

• The wound subsequently continued to decrease in size; at week 18,

at the base; after surgical debridement, a fish skin graft* was applied

request for fish skin graft* was submitted, as the wound stalled

minimal change in wound measurements

and secured with a contact layer

the wound was completely healed

surgical debridement, offloading, and application of dressings to

promote moist wound healing with improvement in tissue quality, but

subsequently, the wound regressed and developed a layer of fibrin

 Clinicians should consider utilizing fish skin grafts* as a treatment for advanced posterior heel pressure injuries persisting despite optimization of patient factors and appropriate wound bed preparation

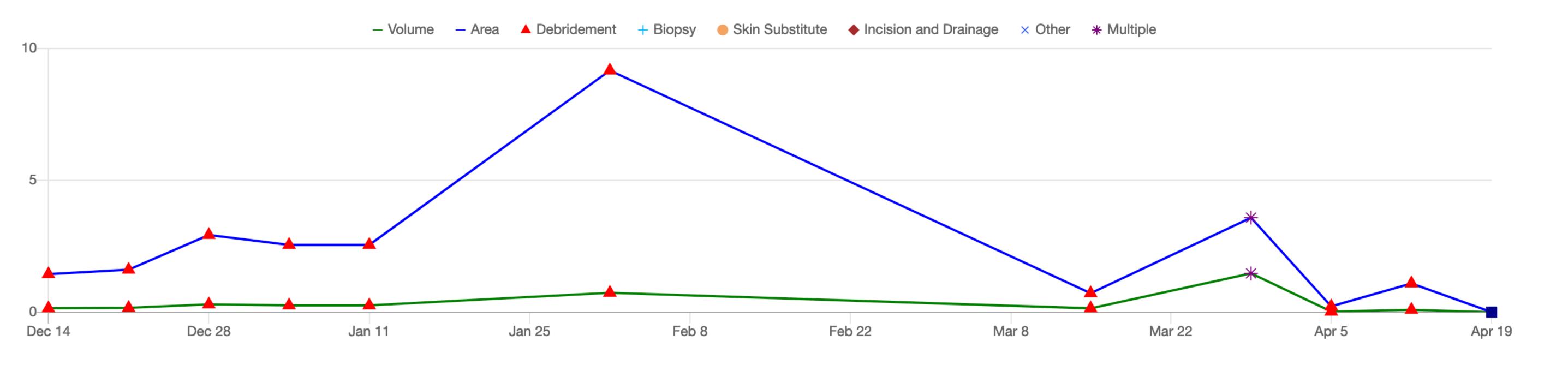


Figure 1. Volume progression over time. Asterisk denotes surgical debridement and fish skin graft* application

Reference

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*KerecisTM, Kerecis, Isafjordur, Iceland