Treating Complex Wounds in a Veteran Population

Howard Myles Kimmel, DPM, MBA
Senior Clinical Instructor, Department of Surgery
Case Western Reserve University School of Medicine
Cleveland, Ohio
Buckeye Foot Care
Cleveland, Ohio
Extremity Vascular Network
Cleveland, Ohio
Disclosures

• None
Surgical Methods

- When traditional wound healing has failed
- Or when traditional wound healing is not an option
- Limb Salvage

- Skin Plastys
- Surgical Offloading
- Muscle Flaps
Case Examples

1. Charcot Recurrent Ulcer
2. Unknown Growth
3. Calcanectomy and Posterior Pressure Ulcer
4. Muscle Flaps
Recurrent Charcot Ulcer

1. 57 year old
2. BKA contralateral side
3. Recurrent Ulceration
4. Mid-Tarsal Breakdown
Unknown Mass

1. 63 year old

2. Previous history of Amputation for non ulcer

3. Presents with a mass That has been present on and off 2 years

4. What is it?

Verrucae Carcinoma vs. Keratoacanthoma
Calcaneal Osteomyelitis/Pressure Ulcer

1. 62 year old male

2. Lupus with long term Steriod use

3. Pressure Ulcer on leg and Calcaneal Plantar Ulcer
Using Muscle Flaps to Close Diabetic Ulcers a Paradigm Shift

Howard Kimmel DPM, MBA, Senior Clinical Instructor, Dept. of Surgery, Case Western Reserve University School of Medicine, Cleveland, Ohio, Edgardo Rodriguez Collazo, DPM, Director, Presence Saint Joseph Iliarov Correction & Microsurgical Limb Reconstruction, Chicago, Illinois, Stephen Frinzi DPM, Mentor, Ohio and Coleman Coughtry DPM, Westlake, Ohio

ABSTRACT

Treating osteomyelitis and wounds of the calcaneus is sometimes a difficult task. One option is amputation, either a proximal Syme’s or a below knee amputation. Another method is intravenous antibiotics with surgical excision of a portion of the calcaneus. The difficulty lies in the closure of the surgical site. A large deficit is present with exposed bone after surgery. Typically some sort of product/graft with negative pressure is used to cover the bone. A more definitive method is utilizing muscle flaps. Peroneus Brevis muscle flaps are used on a routine basis to cover exposed bone of the tibia after open fractures. Even though the procedure can be technically difficult, the muscle flap brings the ability to cover bone, act as recipient for an autograft, and supply the surgical area with a new blood supply to bring intravenous antibiotics to the area.

In this retrospective review, the authors looked at 16 patients between the ages of 37-69. These patients had a calcaneal diabetic foot ulcer with/without osteomyelitis for greater than 6 months. A vascular pedicle Peroneus Brevis flap was used to cover the deficit. Some patients had a partial calcaneotomy. Each patient had application of an external fixation device, bone marrow aspirate injected into the muscle flap, an application of a xenographic dermal regeneration template, and a split thickness graft applied at approximately 3 weeks. Negative pressure was also used on all patients. The external fixator was removed at approximately 15 weeks. Complete closure of the ulcer was achieved on all patients.

Muscle flaps used to close diabetic ulcers presents a paradigm shift, but when done properly it can provide an effective and definitive method of limb salvage.

REFERENCES


LEGEND

1. Peroneus Brevis muscle isolated
2. Muscle passed through sub-cutaneous tunnel
3. Flap sutured in place
4. Xenographic dermal replacement template applied
5. Complex layer closure of incision with re-enforcement via a vessel loop
6. External Ring Fixator applied
7. Complete epithelialization of wound
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