

Soft Tissue Coverage After Revisional Foot and Ankle Surgery

Geoffrey G. Hallock, MD

KEYWORDS

- Revisional foot and ankle surgery
- Local flaps
- Free flaps
- Perforator flap
- Microsurgical tissue transfer

KEY POINTS

- Revisional foot and ankle surgery should be considered a traumatic injury.
- Limb salvage should always be the goal following a complication of revisional foot and ankle surgery.
- The approach to wound management after failure of adequate skin healing following revisional surgery does not differ from treating the traumatic injury, starting with a proper assessment, debridement as indicated, then wound closure using the best method.
- Many local flaps can solve the dilemma of wound closure for the foot and ankle without the need for complex microvascular surgery; but when needed, a free flap may still be the preferred option.
- A multidisciplinary approach with cooperation between a podiatrist and a plastic surgeon competent with all varieties of flaps could be called the “podiatriplastic” approach to best serve these patients.

INTRODUCTION

Those familiar with the traditional wound center in the United States already know and completely understand why most patients treated there typically have chronic wounds primarily of the foot and ankle. This fact is a direct consequence of their other comorbidities, including peripheral vascular disease, diabetes mellitus, or plantar neuropathy of whatever source, to list the major offenders. These can be extremely frustrating problems, as, for example, the Georgetown group has shown that a diabetic patient with a Charcot foot and concomitant skin ulcer even in their skilled hands was found to be 12 to 13 times more likely ultimately to have some form of amputation.¹

Financial Disclosure: None.

Division of Plastic Surgery, Sacred Heart Hospital, The Lehigh Valley Hospital, 1230 South Cedar Crest Boulevard, Suite 306, Allentown, PA 18103, USA

E-mail address: gghallock@hotmail.com

Clin Podiatr Med Surg ■ (2017) ■-■

<http://dx.doi.org/10.1016/j.cpm.2017.02.009>

0891-8422/17/© 2017 Elsevier Inc. All rights reserved.

podiatric.theclinics.com

If the origin of a skin wound were the sequela of some form of surgical intervention in the previously intact foot and ankle, such as insertion of a prosthetic device or arthrodesis as thoroughly discussed elsewhere in this issue, the eventual outcome must always be favorable, as these differ in that they are acute wounds. They can be considered similar to but not as encompassing as those encountered in the usual traumatic “mangled foot,” yet should be approached in an identical stepwise fashion to better ensure success.² A major difference that deserves emphasis is that management of skin complications following any form of revisional foot and ankle surgery, if early enough, can often be solved if a flap is needed by using local tissues only. Such involvement could thereby avoid the need for a free flap, and the more complex risks of microsurgery.

APPROACH

Assessment

A proactive approach by the operative surgeon to recognize as soon as possible that there is or there will potentially be a wound-healing issue will always lead to the best possible outcome. The onus on the surgeon is that for this group of patients requiring revisional surgery, it must be assumed that limb salvage is always imperative, and all steps to achieve that must be followed. Therefore, first a complete vascular evaluation to ensure adequate distal circulation is imperative, and perhaps mandatory in patients at obvious risk even before the initial revision surgery. Underlying bone and joint abnormalities requiring correction must be evaluated via appropriate imaging techniques. The presence of sensibility and perhaps even lack of plantar sensibility should be determined. The extent and location of any soft tissue deficit should be mapped by using the subunit principle as emphasized by the Duke group (**Fig. 1**), as different regions of the foot and ankle will require different tissue solutions (**Table 1**).³

Timing

Once a wound problem exists, and especially if bone, joint, tendon, or prosthesis are exposed, many consider closure as rapidly as practical, even within 72 hours, as the best way to prevent infectious complications.³ Others suggest that the use of negative-pressure wound-therapy devices can extend this safe period before definitive intervention is needed.⁴ Note that information available for retained total knee replacements that have become exposed suggest that in the long term even with early flap closure and chronic antibiotic suppression, half the prostheses are ultimately lost.⁵ However, even for these patients, the quality of life with a functional knee was always better than after arthrodesis or amputation. The same conclusions could be extrapolated for similar foot and ankle scenarios, although there is less documentation in the literature to confirm this.⁶

Debridement

Just as when dealing with the traumatic “mangled extremity,” it is imperative that all devitalized tissue ultimately be removed even if structurally of some importance. Only a pristine wound that will be closed will avoid the risk of later infection and flap breakdown. Simply said, there are 3 things that will accomplish this task: debridement, then more debridement, and finally even more debridement.^{2,3} To assume that the ubiquitous negative-pressure wound-therapy devices by themselves will achieve this goal is erroneous,⁷ as there is never any substitute for the skill of the surgeon.

Download English Version:

<https://daneshyari.com/en/article/5678452>

Download Persian Version:

<https://daneshyari.com/article/5678452>

[Daneshyari.com](https://daneshyari.com)