

## Preface



Thomas S. Roukis, DPM, PhD, FACFAS  
*Guest Editor*

It is with great pleasure that I serve as guest editor for this issue of *Clinics in Podiatric Medicine and Surgery*, devoted to surgical reconstruction of the high-risk patient. The intent of this issue is to provide a step-by-step guideline for performing percutaneous and minimum incision soft-tissue and osseous reconstructive foot and ankle surgery techniques in patients with major deformity or traumatic injury with multiple medical comorbidities. This patient population will commonly have hostile tissues about the foot and ankle, making them at high risk for significant soft-tissue and osseous healing complications that could result in lower limb amputation. Therefore, minimizing the length and number of incisions and associated trauma to the soft-tissue envelope will lead to a greater likelihood of success post-operatively without compromising outcome. The authors selected are respected authorities on the topics they have been assigned and have graciously provided well-written and detailed articles for the reader's review.

Tenotomies and tendon transfers are frequently performed as adjunctive procedures during the global surgical correction of numerous foot and ankle deformities, but the myriad techniques and modifications available for the high-risk surgical patient have not been previously reported in a single article. Likewise, surgical procedures for correction of soft-tissue ankle equinus

---

The opinions or assertions contained herein are the private view of the author and are not to be construed as official or reflecting the views of the Department of the Army or the Department of Defense.

are commonly discussed, but surprisingly little has been written about the actual performance of the procedures presented or clear guidance provided regarding “real world” indications and contraindications for each.

Minimum incision surgery about the forefoot took root in the podiatric community in the 1970s and 1980s. Regardless of whether these procedures will ever gain widespread acceptance by the foot and ankle community at large, minimum incision metatarsal osteotomies occasionally provide the only feasible means of performing structural, isolated, forefoot realignment in the high-risk patient in order to correct deformity resulting in ulceration. Similarly, minimal incision principles can be applied to performing metatarsal ray resections and represent a very elegant and effective approach that should become increasingly more popular as foot and ankle surgeons embrace this soft-tissue envelope protecting technique, as I have.

Balancing partial foot amputations through the use of various soft-tissue and osseous procedures is another commonly discussed topic, with surprisingly little written about the actual surgical techniques. The article presented in this issue of *Clinics* describes several effective procedures that are simple to perform and provide reproducible results. The concept of performing an “internal” transmetatarsal or midfoot amputation is intriguing and has certain benefits, beyond ease of acceptance by the patient, which are discussed in depth.

The performance of minimum incision soft-tissue and osseous surgery about the midfoot and hindfoot has received little attention in the medical literature and essentially no attention with regard to the high-risk foot, yet the procedures are extremely effective, with relatively few complications when performed properly. These techniques should be a part of every foot and ankle surgeon’s procedure “tool-box.” Likewise, the ability to successfully perform corrective midfoot osteotomies is an essential skill that every foot and ankle surgeon must master, and is presented in detail.

Traumatic foot and ankle injuries in the high-risk surgical patient are usually treated conservatively under the erroneous belief that this is the only means of maintaining the lower limb. However, the use of advanced percutaneous and minimum incision internal fixation and external fixation techniques, which respect regional vascular flow and provide ample stability, represent viable options in this patient population.

The use of autogenous bone graft and bone marrow aspirate for osseous healing is not new; however, the ability to harvest these products from the lower extremity has received relatively little attention and is discussed in this issue of *Clinics* in order to provide the readers with a safe, effective, and reproducible means of performing these useful techniques.

The topics discussed should allow the creative foot and ankle surgeon to expand their ability to provide high-risk surgical patients with a stable, plantigrade, and well-balanced foot capable of accepting the repeated stress of ambulation, rather than the proverbial “glass slipper,” which repeatedly ulcerates or develops progressive deformity with use.

It is hoped that the readers of this issue of *Clinics of Podiatric Medicine and Surgery* will enjoy these articles and benefit from the surgical experience of the authors selected as much as I have.

Thomas S. Roukis, DPM, PhD, FACFAS  
*Chief, Limb Preservation Service*  
*Director, Limb Preservation Complex Lower Extremity Surgery and*  
*Research Fellowship*  
*Vascular/Endovascular Surgery Service*  
*Department of Surgery*  
*Madigan Army Medical Center*  
*9040-A Fitzsimmons Avenue, MCHJ-SV*  
*Tacoma, WA 98431, USA*

*E-mail address:* [thomas.s.roukis@us.army.mil](mailto:thomas.s.roukis@us.army.mil)