

Trends in Trauma

The emergent nature of vascular trauma requires a unique state of constant preparedness relative to other peripheral vascular interventions, closer in nature to aneurysm rupture, pulmo-

nary embolism, stroke, or myocardial infarction than atherosclerosis or stable aneurysm exclusion. Its challenges, however, are quite specific to each individual case, with wide-ranging injuries often compounded by other conditions stemming from the event that has caused them. As in many other vascular settings, the treatment of vascular trauma has increasingly moved to endovascular versus open repair when possible. This trend is in part due to advancements in numerous technologies that are often not otherwise considered complementary in other vascular settings, such as embolization materials and covered stents from the aorta to the periphery.

This month, we focus on being prepared for vascular trauma in all its presentations. We've invited colleagues to describe everything from the devices needed to the training, teamwork, and infrastructure that must be in place to successfully treat more patients and continue to improve our capabilities.

Drs. Fritz Angle and James Forrest Calland open our feature with a look back at the developments of the past decade, chronicling advancements in embolization across a variety of anatomies and concluding with an eye on what might come in the next several years.

Given the unpredictable nature and wide range of vascular injuries we encounter, having a diverse array of devices available is clearly a key to successful trauma management. Along with Ricardo Yamada, MD, and Marcelo Guimaraes, MD, Dr. Schönholz describes the many types of devices that should be readily available, including the ideal capabilities of each. The MUSC group's second article for this month provides a comprehensive overview of the current state of the art for managing traumatic carotid lesions.

Vascular units treating trauma, even those that do not do so routinely, must be ready for a variety of scenarios to occur at any given time. Rajesh K. Malik, MD, and colleagues from MedStar focus on optimal

patient management, intake and throughput, communication and teamwork, imaging availability, and awareness of national initiatives such as Stop the Bleed.

Col. Todd E. Rasmussen, MD, authors two articles this month. The first dovetails with Dr. Malik's discussion of Stop the Bleed, wherein Col. Rasmussen outlines the origins and goals of this vital public safety initiative. Col. Rasmussen and colleagues also contribute a brilliant update on the evolution of endovascular capabilities in treating wartime injuries. In this article, we can see how civilian hospitals have learned valuable techniques from combat theatre efforts, and more recently, how combat hospitals are adopting and applying techniques originating in more traditional settings.

The question of how to properly train for trauma care is a complicated one, given how unpredictable each presentation can be. Govindarajan Narayanan, MD, and colleagues from the University of Miami

provide an interventional radiology-based perspective on ideal first cases, mentoring concepts, and multispecialty collaboration.

Another therapeutic pathway still in its evolution is the management of pediatric trauma cases. As C. Matthew Hawkins, MD, describes in his article, there is little in the way of data available for this population. Dr. Hawkins explores the existing literature to date, the prevalence and most frequent presentations, the specific anatomic requirements, and our current endovascular capabilities.

As you can see, trauma care has embraced the endovascular revolution. Hopefully, in the years to come, the relationship of trauma and peripheral vascular disease pathways will continue to positively influence innovation and outcomes. ■



Barry T. Katzen, MD
Chief Medical Editor

Claudio Schönholz, MD
Guest Chief Medical Editor