

Preface



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Guest Editors

Trauma is one of the most common causes of death, especially in young people. The high incidence of trauma explains why anesthesiologists are treating increasing numbers of trauma victims. Participation of anesthesiologists in the resuscitation of trauma victims is important because they are trained to provide advanced airway management, shock resuscitation, and invasive monitoring.

Better motor vehicle safety, combined with better organized and trained prehospital services have improved the survival of severely injured patients admitted to medical centers. This is demonstrated by the constant increase in the “survival to hospital” of patients with very high Injury Severity Scores (ISS). Some of these patients will survive and resume normal lives. These impressive successes are attributed to multidisciplinary team efforts in which novel approaches were introduced by the various disciplines. One of the most important is the use of invasive angiographic procedures to place stents and selectively embolize bleeding blood vessels. These procedures have replaced extremely complicated vascular surgeries. Another major novel approach is damage control procedures aiming to reduce multisystem organ failure and death by firstly stabilizing devastating abdominal injuries.

Recent demographic trends complicated the care of trauma victims as they are associated with an older trauma population. This change is a reflection of the constant increase in many countries in mean life expectancy from 65 to almost 80 over the last 20 years. The elderly trauma patient presents a challenge because of significant underlying chronic disorders coupled with

a multidrug regimen. Finally, the significant increase in prevalence of morbid obesity disorders in the western population demands special attention.

The trauma issue of *Anesthesiology Clinics of North America* is organized into three sectors: current trauma practices, special populations, and terrorism. The contributors were selected to present both American and European trauma experiences and approaches.

The first section of this issue discusses “problem-oriented” issues such as securing the injured airway, initiation of intensive care unit treatment in the operating room, aggressive homeostatic efforts, and management of hemorrhage and shock. A relatively new concept presented is conservative treatment to hemodynamic instability and the transition from aggressive resuscitative regimens to hypotensive resuscitation. Similarly, bleeding control is now part of the invasive radiologist’s practice. Lastly, pharmacologic treatments for bleeding problems have been introduced including fibrinogen concentrates and recombinant factor VIIa. The latter was introduced within the last 4 years as an “off-label indication” for the treatment of exsanguinations. Currently, no human level 1 or 2 scientific support exists to justify its use in trauma. The first double-blind, randomized trauma study did not find a decrease in mortality rate [1]. Recently, the US Food and Drug Administration raised serious doubts about the safety of its use in trauma patients [2]. Currently, a major double-blind study is being conducted in the United States, and its results are eagerly awaited.

The second section discusses the treatment of special high-risk populations, including obese, pregnant, and elderly trauma victims. Treating these populations mandates aggressive supportive measures to improve outcome. To do so, creative anesthetic regimens, such as the use of regional anesthesia in trauma, have been introduced.

The last section addresses the consequences of terrorism. Unfortunately, it is generally accepted today that terror can hit anywhere at anytime. These chapters portray the experience gained in dealing with the aftermath of terror. We chose to present the experience gathered after major terror events in New York, London, and Paris and by the US Army. Finally, chemical and biologic warfare are becoming an increasing menace to our societies. However, a thorough review of these issues is beyond the scope of this issue. Hence, we included a review of the only nonconventional chemical, organophosphate, used in a Japanese terror incident.

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