We are IntechOpen, the world’s leading publisher of Open Access books
Built by scientists, for scientists

4,300
Open access books available

117,000
International authors and editors

130M
Downloads

154
Countries delivered to

TOP 1%
Our authors are among the most cited scientists

12.2%
Contributors from top 500 universities

WEB OF SCIENCE™
Selection of our books indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com
1. Introduction

Head injury is the number one cause of trauma-associated mortality, being directly associated with approximately half of all trauma-related deaths [1]. Every year in the United States, approximately 1.5 million head injuries occur, resulting in 250,000 hospitalizations and 52,000 deaths [2]. Traumatic brain injury (TBI) is the leading cause of death in persons less than 45 years of age [3]. Furthermore, by World Health Organization estimates, TBI will be the third leading cause of death and disability, across all age groups, by the year 2020 [4]. From a cost perspective, TBI results in an astounding $6 billion in direct costs and over $40 billion in indirect costs annually in the United States [5].

For neurosurgeons and intensivists involved, the management of TBI presents many challenges. Many patients with TBI also have traumatic injury to other organ systems, further complicating management. Centers treating a high volume of severe TBI may have better outcomes in terms of mortality and quality of life [6].

Current management of severe TBI consists of a host of surgical and non-surgical modalities. The majority of patients with severe TBI, defined by Glasgow Coma Scale (GCS) 3-8, will be managed nonsurgically. Medical interventions are generally used to optimize intracranial pressure (ICP), maintain cerebral blood flow and oxygen delivery, minimize cerebral edema and maintain a healthy metabolic environment [7]. Surgical treatment in severe TBI is most commonly used for evacuation of intracranial hemorrhage (ICH), especially when there is decreased level of consciousness, focal neurologic signs and/or evidence of intracranial hypertension [7]. Prior to publication of the “Guidelines for the Surgical Management of Traumatic Brain Injury” in 2006, the role of surgery was often based on individual surgeon preference or subjective factors [8]. As noted by the guideline authors, there is a paucity of prospective, randomized controlled trials for surgical
Surgical Treatment of Severe Traumatic Brain Injury


Surgical Treatment of Severe Traumatic Brain Injury

http://dx.doi.org/10.5772/57342


Surgical Treatment of Severe Traumatic Brain Injury

http://dx.doi.org/10.5772/57342

215


Surgical Treatment of Severe Traumatic Brain Injury

http://dx.doi.org/10.5772/57342


Surgical Treatment of Severe Traumatic Brain Injury

http://dx.doi.org/10.5772/57342


