Introduction: Traumatic Brain Injury

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TRAUMATIC BRAIN INJURY (TBI), the most complicated disease of the most complex organ of the body, remains the leading cause of death in the Western world in persons younger than 45 years of age. The field of TBI stands on the shoulders of the giants of Glasgow, Scotland; Richmond, Virginia; and Sweden. The contemporary approach to this injury is principally a reflection of the coma classification scheme of Jennett and Teasdale,⁴ the intensive care management principles framed at the Medical College of Virginia in the late 1970s,² and both remote and recent physiology contributions from Swedish investigators.^{1,3}

Despite the hard-fought efforts of numerous researchers around the world, however, not one Phase III clinical trial of a pharmacological compound for TBI has been successful. But a renaissance is in the making as modern tools are brought to bear on the understanding of and therapeutic interventions for TBI.

Many aspects of the pathophysiology and management of TBI are reflected in this issue of *Neurosurgical Focus*. The issue begins with the latest report from a group in Cambridge regarding the monitoring of cerebral autoregulation—the next frontier in the individualization of the intensive care management of severe TBI. A podcast accompanies the article, and an excellent review of cerebral autoregulation, the brain's intrinsic ability to maintain constant cerebral blood flow, appears later in the issue. Original studies on seizure prophylaxis for TBI in adults and the prognostication of TBI in the pediatric population follow. The issue concludes with reviews on prehospital management, genomics in children with TBI, beta-blockers in TBI, and selective cranial hypothermia. It is hoped that you find the volume informative.

References

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