Special Issue

Perioperative Neuroprotection: Mechanisms, Monitoring, and Clinical Strategies

Message from the Guest Editor

Protecting the brain during the perioperative period is an increasingly important challenge in modern medicine. Patients undergoing surgery are exposed to multiple risks in the perioperative period that affect neurological outcomes, including inflammation, hemodynamic instability, cerebral hypoperfusion, embolic phenomena, anesthetic effects, and postoperative complications. These risks are particularly high for older adults and for patients with a cardiovascular, neurologic, or cognitive vulnerability. This Special Issue will explore the emerging science of perioperative neuroprotection, from mechanisms of brain injury to practical strategies for prevention, monitoring, and recovery. This Special Issue aims to promote a deeper understanding of how perioperative care can be optimized to preserve neurologic function and improve patient-centered outcomes. The topics of interest include, but are not limited to, perioperative neuroinflammation, cerebral monitoring, biomarkers, postoperative delirium and neurocognitive disorders, stroke, anesthetic technique, and interventions aimed at improving brain health after surgery.

Guest Editor

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You are invited to contribute a research article or a comprehensive review for consideration and publication in *Brain Sciences* (ISSN 2076-3425). *Brain Sciences* is an open access, peer-reviewed scientific journal that publishes original articles, critical reviews, research notes, and short communications on neuroscience. The scientific community and the general public can access the content free of charge as soon as it is published.

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