

## INTRODUCTION

**Primary and secondary infections of the brain**Ariane Lewis, MD,<sup>1</sup> Amol Raheja, MBBS, MCh,<sup>2</sup> and Ian E. McCutcheon, MD<sup>3</sup><sup>1</sup>Departments of Neurology and Neurosurgery, Division of Neurocritical Care, NYU Langone Medical Center, New York, New York; <sup>2</sup>Department of Neurosurgery, Neurosciences Centre, All India Institute of Medical Sciences, New Delhi, India; and<sup>3</sup>Department of Neurosurgery, The University of Texas M. D. Anderson Cancer Center, Houston, Texas

**T**HIS issue of *Neurosurgical Focus* addresses primary and secondary infections of the brain. Prevention, diagnosis, and treatment of infections in the brain can be challenging. Even in the setting of early diagnosis, intracranial infections can result in prolonged hospitalizations, seizures, and permanent neurological deficits. These infections are extremely serious and have both high morbidity and mortality rates. While intravenous medications can successfully treat some intracranial infections, in other cases, intrathecal medications or surgical interventions are required. Developing strategies to avoid and address these infections requires a multidisciplinary team of infectious disease specialists, neurologists, and neurosurgeons.

The first half of this issue is devoted to prevention and treatment of surgical site infections (SSIs). We begin with a historic overview of techniques to prevent SSI. Additional articles on SSI prevention describe the use of an infection prevention bundle and prediction of SSI using machine learning.

The second half of this issue focuses on a broad range of primary infections of the brain including *Acinetobacter*,

herpes, neurocysticercosis, nocardia, and syphilis. There are a number of interesting cases accompanied by reviews of the literature and pearls on both diagnosis and treatment. Additionally, there are in-depth analyses of institutional experience with intracranial infections.

We were pleased to find that there is a lot of interest in this topic, as evidenced by the fact that we received 40 submissions for this issue. We would like to thank all of the researchers who shared their work with us and all of you, the readers, who have turned to this issue of *Neurosurgical Focus* to learn about primary and secondary infections of the brain.

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**Disclosures**

The authors report no conflict of interest.

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