INTRODUCTION

Surgical treatment of epilepsy

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Epilepsy surgery is an exciting and dynamic field within neurosurgery. Advances in neuroimaging, neuroscience, neuromodulation, laser technology, robotics, and invasive neuromonitoring are being combined to make epilepsy surgery less invasive, safer, and in some cases more effective. This issue of Neurosurgical Focus contains articles representing the gamut of epilepsy surgery.

Several papers highlight surgical techniques for specific pathologies and/or brain locations. Of particular technical interest is the excellent description of the paramedian supracerebellar approach for selective amygdalohippocampectomy. Another group of articles details the results of surgical series for various approaches and pathologies such as cavernomas, pediatric hemispherotomy, and temporal lobectomy in elderly patients. Several submissions focus on ways in which advanced neuroimaging contributes to selecting epilepsy surgery candidates. Other papers describe aspects of procedures new(er) to North American epilepsy surgery, including stereotactic laser ablation/laser interstitial thermal therapy (LITT) and stereo-EEG (SEEG). Important research topics include the extension of SEEG recording to study the limbic thalamus in human epilepsy and the potential for interneuron transplantation as a human epilepsy therapy.

This issue of Neurosurgical Focus represents an international sampling of many of the subject areas that make epilepsy surgery a technically challenging, progressively evolving, and scientifically fruitful field within neurosurgery.

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Disclosures

Dr. McKhann reports that he has a personal relationship with Medtronic as an investigator in the SLATE trial of laser ablation for temporal lobe epilepsy; he is a consultant for Koh Young Inc. Dr. Gross reports that he is a consultant for Medtronic, NeuroPace, Boston Scientific, Abbott, and Zimmer Biomet. Dr. Chabardes reports that he is a consultant for Medtronic and Boston Scientific.

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