

© Barrow, 2009

DEFINING ELOQUENT CORTEX WITH SUBDURAL ELECTRODE ARRAYS

---

C O M M E N T S

---

Neurosurgeons and their patients can confront many challenging dilemmas during treatment. For example, the resection of primary low-grade cortical tumors, especially those with indistinct borders with normal tissue, can be associated with significant postoperative neurological deficits. The traditional approach for minimizing damage to functional cortex while maximizing outcomes has been intraoperative awake stimulation. However, not all patients are candidates for this procedure. In this issue, Little et al. evaluate the advantages and disadvantages of using an alternative procedure, subdural grid electrodes, for mapping functional gyri to define the safest corridor for tumor resection.

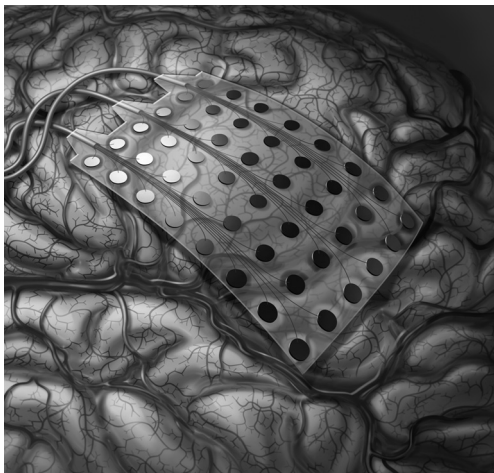
Also in this issue, Garrett and Eschbacher review dysembryoplastic neuroepithelial tumors (DNET), lesions recognized only in the last 20 years. These lesions are usually considered benign, but their natural history is not yet defined. The authors discuss the potential for malignant transformation of the rare recurrent DNET and suggest that the prudent course is regular clinical and radiographic follow up for patients harboring these tumors.

Another article focuses on skull base allergic fungal sinusitis, a neurosurgical entity that can be mistaken for a skull base tumor and should be considered in the differential diagnosis of a paranasal sinus mass in young atopic patients. In particular, in hot, arid climates such as the Southwest, *Bipolaris* should be suspected as the cause of such infection, as occurred in the six patients reported by Van Gompel and coworkers.

This issue also features other unusual cases treated at our institution. For instance, Aliabadi and colleagues report a 14-year-old boy with encephalopathy and signs of meningeal inflammation. Unexpectedly, the cause was tuberculosis. The boy had likely contracted the disease before his family emigrated from Kenya—a reminder that travel and immigration patterns must be considered in the diagnosis of patients with unusual presentations. Finally, Wilson et al. report a patient with a diskal cyst that caused radiculopathy, which was clinically indistinguishable from the radiculopathy associated with a disk herniation.

The articles in this issue are just a sample of the challenging clinical problems that clinicians and researchers at Barrow devote their careers to solving. To help us continue to share our experiences with the medical community throughout the world, please consider sending a tax-deductible donation in the enclosed self-addressed and stamped envelope. Thank you.

*Robert F. Spetzler, MD*  
*Editor-in-Chief*



This issue's cover depicts functional mapping of the cortex with a subdural electrode array to define the borders of eloquent cortex to aid tumor resection. See the article by Little et al. on page 4. The illustration is by Mark Schornak.