

## **Effectiveness Of Awake Craniotomy For Epileptogenic Focus Resection**

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With the advancement in medical equipment and computer technology, pre- and intraoperative functional brain mapping and monitoring methods have dramatically progressed in the last decade. As these methods provide information on brain functions that are helpful for determining surgical strategies, functional neurosurgery techniques have evolved into the field of general neurosurgery.

Clinical usefulness of intraoperative neuroimaging and awake surgery based on electrophysiological evaluation was studied in ninety-six patients with epilepsy. Before surgery, we performed fiber-tracking imaging, functional MRI, magnetoencephalography, and PET/SPECT then transferred these information to the neuronavigation system to decide the position of subdural electrodes implantation. During removal of the epileptogenic area, neurological function was evaluated by cortical/subcortical electrical stimulation and elicitation of voluntary activity. To preserve subcortical network, combined use of evoked potential and tractography is useful. Intraoperative electrocorticography without anesthesia was applied to identify further epileptogenicity. Intraoperative use of various physiological evaluations such as neuroimaging and awake surgery is useful for some physiological condition.