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Seizure Outcome After Surgical Resection of Insular Glioma

A presentation at the 2017 American Association of Neurological Surgeons Annual Scientific Meeting

Los Angeles, Calif. (April 25, 2017) — Winner of the Journal on Neuro-Oncology Award sponsored by Kluwer Academic Publishers, Doris Du Wang, MD, presented her research, *Seizure Outcome After Surgical Resection of Insular Glioma*, during the 2017 American Association of Neurological Surgeons (AANS) Annual Scientific Meeting.

A majority of patients with insular tumors present with seizures, and although a number of studies have shown that greater extent of resection improves overall patient survival, few studies have documented post-operative seizure control after insular tumor resection. The aim of this study was to 1) characterize seizure control rates in patients undergoing insular tumor resection, 2) identify predictors of seizure control and 3) evaluate the association between seizure recurrence and tumor progression.

The study population included adults who had undergone resection of World Health Organization (WHO) Grade II, III or IV insular gliomas between 1997 and 2015 at the University of California, San Francisco. Preoperative seizure characteristics, tumor characteristics, surgical factors and postoperative seizure outcomes were reviewed.

Of 287 patients who underwent insular glioma resection, 64 percent presented with seizures and 92 patients with sufficient clinical data were included. At one year after surgery, 67 percent were completely seizure free and 87 percent were free from disabling seizures. At final follow-up, 38 percent were seizure free and 75 percent were free from disabling seizures. Multivariate proportional hazard analysis revealed that later seizure onset age, greater extent of resection and longer time to tumor progression were significant predictors of seizure freedom. Seizure recurrence was significantly associated with tumor progression. Repeat resection offered additional seizure control as nine of the 21 patients (43 percent) with recurrent seizures became seizure free after re-operation.

The conclusion of the study was to recommend maximizing the extent of resection in insular gliomas as it not only offers survival benefit, but also portends greater seizure freedom after surgery. Seizure recurrence is predictive of tumor progression, and repeat operation can lead to additional seizure control.

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Disclosure: The author reported no conflicts of interest.

Media Representatives: The 2017 AANS Annual Scientific Meeting press section will include releases on highlighted scientific research, AANS officers and award winners, Neurosurgery Awareness Month and other relevant information about the 2017 program. Releases will be posted under the “Media” area on the 2017 AANS Annual Scientific Meeting [website](#). If you have interest in a topic related to neurosurgery or would like to interview a neurosurgeon — either onsite or via telephone — during the event, please contact Alice Kelsey, AANS associate executive director, via email at aik@aans.org.

About the 2017 AANS Annual Scientific Meeting: Attended by neurosurgeons, neurosurgical residents, medical students, neuroscience nurses, clinical specialists, physician assistants, allied health professionals and other medical professionals, the AANS Annual Scientific Meeting is the largest gathering of neurosurgeons in the nation, with an

emphasis on the field's latest research and technological advances. The scientific presentations accepted for the 2017 event will represent cutting-edge examples of the incredible developments taking place within the field of neurosurgery. Find additional information about the 2017 AANS Annual Scientific Meeting and the meeting program [here](#).

Founded in 1931 as the Harvey Cushing Society, the American Association of Neurological Surgeons (AANS) is a scientific and educational association with more than 10,000 members worldwide. The AANS is dedicated to advancing the specialty of neurological surgery in order to provide the highest quality of neurosurgical care to the public. Fellows of the AANS are board-certified by the American Board of Neurological Surgery, the Royal College of Physicians and Surgeons of Canada or the Mexican Council of Neurological Surgery, A.C. Neurosurgery is the medical specialty concerned with the prevention, diagnosis, treatment and rehabilitation of disorders that affect the spinal column, spinal cord, brain, nervous system and peripheral nerves.

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