Mutation Linked to Some Cases of Parkinson’s

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New Findings Improve Counseling for Epilepsy Surgery

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BRECKENRIDGE, COLO. — Recent research has enabled physicians to counsel patients with drug-refractory temporal lobe epilepsy more effectively about the risks and benefits of resective surgery. Lauren C. Frey, M.D., said at a conference on epilepsy syndromes sponsored by the University of Texas at San Antonio. Moreover, there are now data that for the first time begin to address the impact of withholding surgery in such patients, said Dr. Frey, a neurologist at the University of Colorado, Denver.

These studies demonstrate that contin-ued, poorly controlled and chronic seizures are associated with increased rates of cognitive decline, impaired quality of life, injury, and even sudden death. In one recent study, investigators at the University of Göteborg (Sweden) performed formal neuropsychologic testing in 76 adults with a mean age in their early 30s who had long-time, drug-resistant partial epilepsy and in a healthy control group matched for age, gender, and education. Overall, the baseline was worse in patients with intractable epilep-sy than controls. At follow-up testing near-ly 5 years later, patients showed further significant declines in general cognition and verbal memory (Epilepsy Behav. 2004;5:37-56).

Conference director José E. Cavazos, M.D., observed that sudden unexpected death in epilepsy patients (SUDEP) is an important issue to raise in counsel-ling patients about the risks and benefits of epilepsy surgery. Studies suggest the incidence of SUDEP is 1 in 200 per year among pa-tients with in-tractable epilepsy, and that this risk is erased in those whose seizures become well con-trolled, said Dr. Cavazos of the South Texas Comprehensive Epilepsy Center at the Uni-versity of Texas at San Antonio. In a typical year, SUDEP claims two or three lives among adults seen at the cen-ter who decline surgery for drug-refrac-tory epilepsy, Dr. Cavazos added.

Dr. Frey said that probably the best study to date addressing mental decline in patients with uncontrolled epilepsy in- volved 147 adults with a mean age in their early 30s at baseline with surgically and 102 with medically managed temporal lobe epilepsy evaluated longitudinally at the University of Bonn (Germany). Neuropsychologic testing conducted at baseline and at 1, 2, and 10 years’ follow-up showed progressive cognitive deterio-ration, particularly in memory function, in those patients whose seizures continued despite surgery or medical man-agement. Surgery, whether successful or not, caused cognitive deficits in the short run, but the deficits were often re-ver-sed in patients who became seizure free (Ann. Neurol. 2003;54:243-32).

This study highlights the dichotomous nature of epilepsy surgery outcomes. Many patients are double winners: They become seizure free, with a resultant halt in the long-term cognitive decline associ-ated with chronic seizures as well as the po-tential for reversal of the deficits caused by surgery. But a smaller number of patients are double losers: They experience contin-ued seizures resulting in progressive cog-nitive deterioration as well as acceleration of the deficits associated with the surgery. A landmark randomized controlled tri-al of surgery for refractory temporal lobe epilepsy (80 patients) showed 38% of surgically treated patients were free of seizures impairing consciousness at 1 year, compared with 8% of medically treated pa-tients. Also, 38% of surgically and 3% of medically treated patients were complete-ly seizure free. The surgical group scored significantly better on the Quality Of Life In Epilepsy-89 (QOLIE-89) and showed trends for higher rates of employment and school attendance. Participants had a mean age in their early to mid 30s.

Twenty-two surgically treated patients had subtle visual field deficits of which they were unaware, while they experi-enced a decline in verbal memory that interfered with their work performance (N. Engl. J. Med. 2001;345:311-3).

Other studies have shown that this surgically related verbal memory impairment doesn’t improve over time and can have a significant quality of life impact. Risk factors identified for this verbal memory decline include later age of epilepsy onset, higher memory perfor-mance at baseline, dominant hemisphere resection, no clear asymmetry of memo-ry function deteriorating, and an absence of clear structural abnormalities of the mesial temporal structures on the side being considered for resection.