Finally, the study by D'Andrea et al.<sup>4</sup> was an open-label, uncontrolled trial that assessed the change in aura status following combination treatment of 60 mg Ginkgo Biloba Terpenes Phytosome, 11 mg coenzyme Q10, and 8.7 mg vitamin B2. Standard outcomes used in migraine preventive trials, including frequency of attacks or number of headache days, were not assessed.

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## EPILEPSY SURGERY TRENDS IN THE UNITED STATES, 1990-2008

**Juan Gomez-Alonso, Vigo, Spain:** Englot et al.<sup>1</sup> concluded that after the failure of 2 antiepileptic drug (AED) trials, patients "should be referred . . . for surgical evaluation." The authors considered their recommendation consistent with the guidelines of the American Academy of Neurology (AAN).<sup>1</sup>

However, what the AAN recommended was the referral of patients "who have failed appropriate trials of first-line AEDs." The AAN also indicated that "this practice parameter provides no evidence for guidelines on when to abandon pharmacotherapy. Consequently, both early and late surgery should be accepted as equally valid options, due to the lack of scientific evidence favoring one of them.

Englot et al. 1 considered temporal lobectomy safe. However, while its efficacy is superior to that of a third AED trial, 36% of surgically treated patients can be left with permanent memory problems.<sup>3</sup> Therefore, undertaking new AED trials after the first 2 failures may appear to both patients and doctors as a less risky and still potentially valuable option.<sup>4</sup>

To avoid the present uncertainty when advising patients, the implementation of a large, prolonged, and independent comparative effectiveness study between medical and surgical therapy in refractory epilepsy could be very helpful.

Author Response: Edward F. Chang, Paul A. Garcia, San Francisco: We thank Dr. Gomez-Alonso for raising this issue. It is now clear that even small randomized, controlled trials have sufficient power to demonstrate the superiority of surgical epilepsy treatment over ongoing medical management in controlling seizures. In light of the significant morbidity and mortality associated with uncontrolled seizures, we cannot recommend delaying surgery in patients who are candidates for this treatment. While it is true that subtle changes in verbal memory and naming are often noted on sensitive neuropsychological measures after surgery, these expected changes are much less intrusive in patient functioning than ongoing seizures.

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## Epilepsy surgery trends in the United States, 1990–2008

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