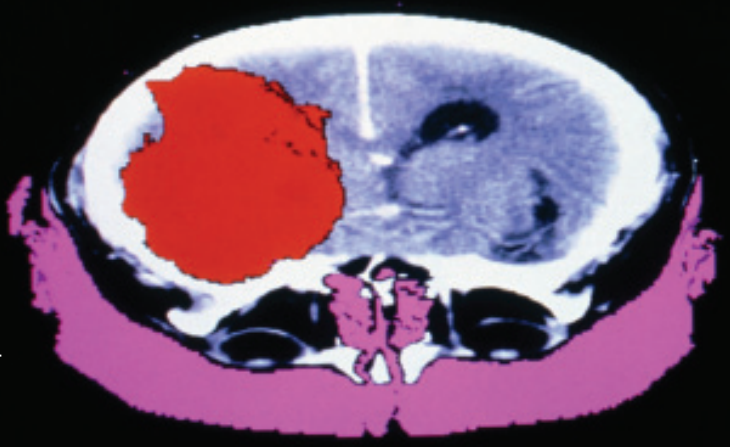
THE WAITING ROOM

THIS WAY IN

Antiepileptic Drugs for Treating Brain Tumors?

BY ANDREA KING COLLIER



GLIOBLASTOMA: Computed tomography (CT) brain scan revealing a glioblastoma in red.

CNRI/ PHOTO RESEARCHERS, INC

A study in the September 20, 2011, edition of Neurology, the official medical journal of the American Academy of Neurology (AAN), suggests that valproic acid—a commonly prescribed antiepileptic drug (AED)—may help people living with the brain tumor known as glioblastoma live longer.

The study was conducted by Michael Weller, M.D., a professor in the department of neurology at University Hospital in Zurich, Switzerland, and colleagues. They found that valproic acid had a greater impact on survival than other AEDs used in tandem with chemotherapy.

WHAT IS GLIOBLASTOMA?

Glioblastoma (or glioblastoma multiforme) is one of several kinds of glioma, which are tumors that arise from glial cells in the brain or spinal cord. Glial cells form the "gluey" brain tissue that provides structure and function for neurons, which carry nerve signals.

Nearly 17,000 primary brain tumors (tumors that start in the brain) are diagnosed in the United States each year, and more than half are gliomas.

Glioblastomas are faster growing and have a shorter overall survival rate than other gliomas, such as oligodendrogliomas.

The average survival rate for someone with glioblastoma is approximately 15 months. Another 10 percent of patients have a five-year survival rate. Half of the patients who are diagnosed but not treated only survive three months.

According to the American Cancer Society, there has been little improvement in survival rates for glioblastomas over the past two decades. Glioblastoma is the cancer that claimed the life of the late Senator Edward Kennedy.

> The short-term improvement in survival due to AEDs may come at too high a cost in terms of quality of life, some experts say.

WHY ANTIEPILEPTIC DRUGS?

Seizures have long been a hallmark symptom of people with glioblastoma.

"About 25 percent of glioblastoma patients will have had seizures at the time of their first office visit. Another 20 percent or so will develop seizures later on during the course of their illness," says David Schiff, M.D., the Harrison Distinguished Professor of Neurology, Neurological Surgery and Medicine a the University of Virginia in Charlottesville, VA, and co-director of the UVA Neuro-Oncology Center.

The use of AEDs to manage the epileptic symptoms of glioblastoma led to research on their impact on survival rates. In 2009, a retrospective analysis of three trials performed by the North Central Cancer Treatment Group suggested a possible association between certain kinds of AEDs and longer survival in people with glioblastoma.

In a retrospective analysis, researchers look back at data from an earlier trial. Many important studies, such as several that identified risk factors for breast cancer, have been retrospective. However, numerous opportunities for bias exist in a retrospective study. For example, researchers may subconsciously select only certain patients from the earlier study to include in the analysis.

WHAT DID THE STUDY SAY?

In the study published in Neurology, the investigators found that valproic acid had a greater impact on survival than other AEDs used in tandem with chemotherapy. Patients who received valproic acid also fared better than patients who were not on any AED.

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TRAVELS WITH ELVIS: Patti Klein, Martin Shenkman, and Elvis on the road to raise awareness of financial planning for people with chronic illness.

INSPIRING PEOPLE

Martin Shenkman and Patti Klein

Meet Martin Shenkman and Patti Klein, a man and a woman on a mission. Klein was diagnosed with multiple sclerosis (MS) six years ago. That's when the two New Jersey residents—he's a tax attorney and a CPA, she's an anesthesiologist—had to face the difficult task of restructuring their estate and financial plans due to her illness.

Even with his background, Shenkman could find little information on financial planning for people with MS. Since then, the couple have embarked on a campaign to educate people about the need for a financial game plan tailored to each patient's condition.

"Health care costs play a major role in two-thirds of all personal bankruptcies," Shenkman stresses. "Proper financial planning can avert a catastrophe."

A diagnosis of a chronic illness doesn't mean the end of earning potential, notes Shenkman.

"For some neurologic diseases, individuals who are newly diagnosed have a window of productive years where they can successfully continue working, saving, and investing. It's important to learn how to maximize and leverage those years," Shenkman says.

Klein's neurologist insisted that she stop working nights and weekends, as a regular sleep schedule was critical to her health. She also began nightly injections of glatiramer acetate (brand name Copaxone). Three and a half years after her diagnosis, Klein had to stop working. After Klein was diagnosed, the couple consolidated their financial accounts to reduce paperwork and converted everything possible to auto-pay to reduce the number of transactions each month.

When Klein's illness made traveling by air too difficult, the couple purchased an Airstream RV and took their message on the road. By then, they had become dedicated volunteers for the National Multiple Sclerosis Society.

Along with Elvis, their Norfolk Terrier, Shenkman and Klein began staging free financial and estate-planning seminars for people with chronic illnesses across the country. (Go to rv4thecause.org or chronicillnessplanning.org for more information.)

Since Klein's diagnosis, Shenkman has also written four books on these topics, including Estate Planning for People with a Chronic Condition or Disability (demoshealth.com; all profits go to charity) and Funding the Cure, a book on fundraising for the National MS Society (nationalmssociety.org). In addition, he has written articles on financial planning for the Michael J. Fox Foundation for Parkinson's Research (michaeljfox.org).

Legal experts advise people recently diagnosed with an illness that is expected to cause declining mental and physical health to update their financial and legal arrangements as soon as possible.

People should also review their life insurance policy to see if it allows them to convert. Klein converted her term life insurance policy to a permanent policy because she knew that obtaining new insurance would be very costly, if it were even available. Term life insurance policies only provide coverage for a pre-established period of time, after which coverage ends. But many term policies will allow a policyholder to switch to a permanent policy within a specific period of time. If a policy does include such a window, it is important to opt-in, according to Shenkman.

NEW SERIES: Look for our upcoming series on legal and financial planning by Martin Shenkman, J.D., C.P.A.

Unfortunately, neurologists and patients rarely discuss the need for financial planning, according to Sotirios Parashos, M.D., Ph.D., a neurologist and Parkinson's disease (PD) specialist at the Minneapolis Clinic of Neurology in Edina, MN, and member of the American Academy of Neurology (AAN).

"I suspect many patients are unaware of this aspect of their illness, but they should be. Some individuals haven't thought of it yet, while others may be too timid to bring the subject up," Dr. Parashos says.

Dr. Parashos advises patients to talk to their neurologist about what they can realistically expect in terms of their short- and long-term employment.

Awareness of financial and estate planning specifically for individuals with chronic neurologic disorders is still in its infancy, says Dr. Parashos, but hopefully that will change: "For a lot of people, the subject doesn't even cross their minds until they find themselves with expenses that they just can't pay." —Kurt Samson

PHOTO COURTESY MARTIN SHENKMAN

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The investigators conducted a retrospective analysis of temozolomide (chemotherapy) and radiation therapy for glioblastoma to see if overall survival or progression-free survival (PFS)—which is the time during and after treatment that the patient's cancer does not worsen—were influenced by AED use.

The study included 573 patients with glioblastoma who were treated with radiation therapy alone, or radiation therapy with temozolomide, between 2000 and 2002. A total of 68 percent received an AED. (The study authors inferred that patients were receiving an AED to treat or prevent seizures associated with their glioblastoma.) According to the study, patients who were given valproic acid survived three months longer than those who were given other AEDs or no treatment.

WHAT DOES THE STUDY MEAN FOR PATIENTS?

The study suggests that valproic acid increased survival not by controlling seizures—which by themselves are usually not life threatening, says Dr. Schiff—but by improving the body's response to radiation therapy and chemotherapy.

"Despite the limitations of this retrospective analysis, these results suggest that the choice of [AED] in patients with brain tumors should be carefully considered because it may affect survival," concluded Dr. Weller and colleagues. They are now looking to conduct further studies on other AEDs to see if any offer longer survival with fewer side effects.

However, "Patients and physicians need to be cautious in interpreting the importance of this study," says Gary Gronseth, MD., professor and vice chairman of the neurology department at the University of Kansas in Kansas City and a Fellow of the AAN. "There is a reasonable chance that a rigorous trial will show that valproic acid has no effect on survival. Furthermore, people who have glioblastoma without seizures should not be given AEDs, including valproic acid. Rigorous studies show that prescribing AEDs does not prevent the development of seizures and that the AEDs cause side effects."

The side effects of AEDs can include dizziness, weight gain, and negative interactions with other medications, such as those for HIV. Valproic acid can also produce low blood counts in people with glioblastoma; some patients have had to delay 30 percent of their chemotherapy cycles as a result, the study reports.

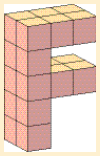
The short-term improvement in survival due to AEDs may come at too high a cost in terms of quality of life, some experts say..

"I was disappointed because the study did not address the impact these drugs have on quality of life," says Lynne P. Taylor, M.D., Fellow of the AAN and neuro-oncologist and Director of Palliative Care at Tufts Medical Center in Boston, MA.

"If you are talking about a better quality of life for the time you have versus using a therapy that may prolong life for a month but decrease the quality of life, most patients choose quality of life," Dr. Taylor says.

NEUROBICS

One Good Turn Deserves Another



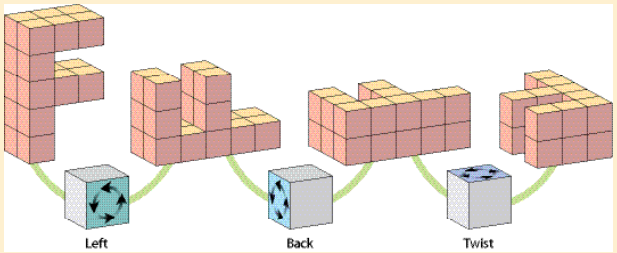
This puzzle tests your ability to rotate shapes in your imagination. Suppose the three-dimensional block letter shown to the left is sitting on a table in front of you. You are allowed to turn it three different ways:

L means to tip the block 90 degrees to the left.

B means to tip the block 90 degrees back away from you.

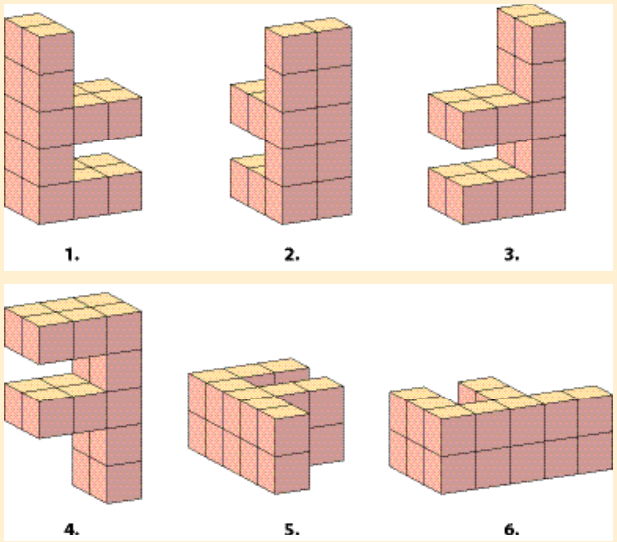
T means to twist the block 90 degrees counter-clockwise, as seen looking down at the table.

For instance, if we do the operations LBT in that order, the block turns like this:



Here are six more turning sequences and six more blocks. For each sequence, write the number of the block that shows how the block will appear if the turn sequence is applied to the original block. For instance, the turn sequence LL produces block 3.

LL_3_BT___TBL___BLB___TTLL___LTBT___

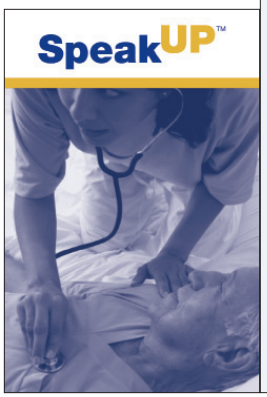


—Scott Kim

ANSWERS ON P. 16

NEUROLOGY NEWS

Speak Up for Stroke Campaign



The photograph used to illustrate the new "Speak Up for Stroke" campaign by The Joint Commission—an independent not-for-profit group that accredits more than 19,000 health care organizations and programs in the United States—vividly captures its central message: When it comes to stroke, every minute counts. In the image, a nurse leans over an older man on a bed, listening to his heart with a stethoscope. Her hand presses on his shoulder reassuringly while her eyes gaze intently at the time.

The bilingual English and Spanish campaign is a first-time collaboration between the American Academy of Neurology (AAN), the American Association of Neuroscience Nurses, the American Heart Association (AHA)/American Stroke Association, the National Stroke Association, and the National Institutes of Health/National Institute of Neurological Disorders and Stroke. (Go to jointcommission.org/speakup.aspx for more information.)

Other Joint Commission "Speak Up" programs, all designed to motivate people to take a more active role in their health care, focus on breastfeeding, dialysis, visiting the doctor's office, understanding medical tests, recovering after leaving the hospital, preventing medication and surgery mistakes, and preparing to become a living organ donor. Adding stroke to this history of programs is an acknowledgement that preventing stroke is a major public concern.

"One of the great impediments to early and effective treatment of stroke is the late arrival of many patients who were otherwise good candidates for treatment," says Bruce Sigsbee, M.D., Fellow and president of the AAN.

"In addition to having the appropriate team in place to rapidly assess and treat patients, it is important to educate the public on the signs of stroke and the need to get to the emergency department right away."

"There is now a common perception that we need to be doing more to improve stroke care," adds Ralph L. Sacco, M.D., M.S., Fellow of the AAN and AHA, and past president of the American Heart Association/American Stroke Association. "It makes sense for all of us working in the field to combine efforts and start moving forward on prevention," Dr. Sacco says.

According to The Joint Commission, much current stroke research focuses on risk factors, the process of brain damage that stroke causes, the genetics of stroke, ways to help the brain repair itself after a stroke occurs, and how to prevent reoccurrence—approximately one of out of four stroke patients have another one.

"Any program that improves education about stroke, and ways to catch it early, will greatly improve people's health in this century," Dr. Sacco notes.

"Speak Up for Stroke gives a name to the efforts we all need to undertake to educate the public about the warning signs," Dr. Sigsbee says. "With stroke, every minute counts, so it's important that people pay attention to any symptoms and call 911 in order to get to an emergency department as soon as possible."—Paul Smart

WARNING SIGNS OF STROKE

Stroke strikes fast. You should too. Call 9-1-1 if you experience any of these signs:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause

Call 911 immediately if you or someone you are with shows signs of having a stroke. Do not try to drive yourself to the hospital.

Stroke can happen with just one of these symptoms, and the symptoms can vary. In addition, the symptoms can either start slowly or come on quickly.

AAN EVENT

Last Chance to Register for FREE Brain Health Fair in New Orleans

Brain Health fair

Register your family and friends now to attend the Brain Health Fair, Saturday April 21, 2012, at the New Orleans Ernest N. Morial Convention Center in New Orleans, LA. The Brain Health Fair is a free, daylong family event connecting thousands of patients, families, and caregivers affected by a neurologic disorder with important resources to win the battle against brain disease. People can attend FREE classes and exhibits to learn from some of the best and brightest neurologists in the world about the latest research advances in Alzheimer's disease, autism, brain injury, epilepsy, headache, multiple sclerosis, Parkinson's disease, sleep disorders, stroke, and other types of brain disease. Go to BrainHealthFair.com to learn more.

NEUROBICS ANSWERS CONTINUED FROM P. 15

LL = 3; BT = 6; TBL = 5; BLB = 2; TTLL = 1; LTBT = 4