

NEWS

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*****Epilepsy outpatient treatment clinic designed for "problem epilepsy".

DALLAS--Patients with "problem epilepsy," those who have seizures in spite of taking anti-convulsant medication, are now the focus of a team of physicians at The University of Texas Health Science Center at Dallas.

Uncontrolled seizures may be due to a misdiagnosis in which a patient is receiving the wrong medication, according to neurologist Dr. Robert Leroy, assistant professor in the UTHSCD Department of Neurology and co-director of the epilepsy outpatient clinic in the Aston Ambulatory Care Center on the health science center campus.

Leroy is joined in treating problem epilepsy cases by neurosurgeon Dr. John Mullen, clinic co-director; neurologist Dr. Ralph Greenlee and neuropsychologist Dr. Jim Hom, along with an extensive support staff. Inpatients are hospitalized in the Epilepsy Treatment Center at Parkland Memorial Hospital, which Leroy and Mullen also direct, or at the epilepsy center at the Dallas Veteran's Administration Medical Center, headed by health science center neurologist Dr. Richard Homan.

Epilepsy is related to head injury, infection, genetic malformation, poor nutrition and a number of other causes. Even though seizures could happen to anyone, social rejection is often far more damaging than the disease itself.

Four years ago Scott, then a student at a small Texas college, had his first seizure while sitting in a classroom. He awoke in a hospital, not fully understanding what happened to him. A week later he was back in class. "Nobody said anything to me, in fact they stayed away from me. I was really embarrassed because I didn't know what I did during the seizure," says Scott.

Scott had several other seizures that semester, mostly in his dorm room. "After one seizure I woke up behind the desk in my room. I just got in bed and slept the rest of the day."

A doctor prescribed anti-convulsant medication, which Scott took for three years, but seizures continued unabated. A year ago Scott was referred to Leroy at the health science center. He was hospitalized at Parkland where tests revealed Scott's seizure disorder had been misdiagnosed and that a different drug was needed.

Scott has been seizure-free for a year, is doing well at another college and recently was granted a Texas driver's license.

Eighteen-year-old Keith was taking 20 pills a day to suppress his epileptic seizures, but seizures continued. The medication worked only to blur his thinking, dulling his personality.

Keith's seizures ended when a pecan-sized, grey lump was surgically removed from the left side of his brain. Laboratory reports showed it was a blood vessel abnormality probably present from birth.

Dr. John Mullen, assistant professor of Neurosurgery and Neurology at the health science center, says brain surgery can benefit about half the epilepsy patients whose seizures don't respond to anti-convulsant drugs. Of the two to four million people in the U.S. living with chronic recurrent seizures, one tenth could be considered for surgery, Mullen says.

Multiple electroencephalograms (EEGs) are used prior to and during surgery to identify irregular brain waves and to locate the focus of the seizures. In Keith's case, Mullen says the growth itself had not produced the seizures. It was damaged

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tissue around the growth that had erratically discharged electrical activity throughout the brain.

"Highly epileptogenic tissue is non-functioning brain and will only produce a worsening of symptoms if left alone," says Mullen.

Patient selection for neurosurgery is based on an unresponsiveness to drugs and to the type of seizures. Seizure disorders amenable to surgery are commonly of the type termed "partial," meaning they emanate from a part of the brain rather than being a generalized discharge throughout the brain. "Temporal lobe epilepsy" constitutes the majority of partial cases treatable by surgery. The two temporal lobes of the brain, one on either side above the ear, control memory. If one is diseased, resulting in seizures, it usually fails to function and the other temporal lobe serves for the two, says Mullen.

Neuropsychologist Dr. Jim Hom provides behavioral and cognitive testing for patients with epilepsy and other neurologic diseases. An eight-hour testing session utilizing the Halstead-Reitan Neuropsychological Test Battery along with intellectual and personality tests can identify brain-behavior dysfunctions, Hom says. These dysfunctions can be used to understand how certain brain lesions affect a person's ability to think and work. "Neuropsychological functioning correlates with certain brain lesions and provides a good statement of the individual's adaptive abilities," he says. Testing can also be used to identify degrees of drug toxicity when drugs lower performance levels.

"In a person suffering from epilepsy there may be specific losses of abilities and general losses of cerebral functioning. We may not see major drops in intelligence but we do see losses in higher cognitive function, such as difficulties in abstract reasoning," says Hom.

"Deficits may remain a long time, even after major physical recoveries have taken place. For example, a patient with a head injury may regain his ability to walk and talk and then go back to work. But two weeks later he may be fired because he can't cope at his former level of ability. This inability to function is often misunderstood since the person is physically okay."

By understanding a person's strengths and limitations, counseling and rehabilitation can help the patient learn how to compensate. "For example, if a person has difficulty with memory functioning then they can keep lists or carry a tape recorder to help them deal with that limitation. If a person has difficulty in abstract reasoning and flexibility of thought then they are advised to slow things down and avoid being in a position to make decisions quickly," says Hom.

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