

ACUTE AND CHRONIC EPILEPSY EXPLAINED IN 6 CASES

Matthew Hoerth

Pregnancy Case

A 28 year-old female presents to the outpatient clinic for evaluation of a convulsion that occurred 2 weeks prior. This was the second convulsive event that has occurred. Her first event was approximately a year and a half ago. The first event that occurred took place when the patient was under significant amounts of “stress”, but no definite provoking factors. Since this was a single event, and the patient’s work-up at that time was normal, no therapy was prescribed. The more recent event occurred in the context of “stress” as well. She was attending a Bachelorette party in Las Vegas, where she states she did not drink alcohol excessively, but she did have relatively little sleep. Review of emergency room records were unrevealing for any provoking factors for the seizure that occurred.

Currently the patient states that she currently feels completely normal. However, upon further history, the patient notes that she has had strange events of déjà vu. This has occurred only over the last month, with the events having associated nausea, and when stronger some mild disorientation. These are brief, lasting only about 30 seconds, but are not disabling or worrisome to her.

Past medical history is otherwise unremarkable. The patient also states that she was married about 3 years ago, and is planning to start a family soon.

Workup reveals a normal MRI brain and EEG shows infrequent right temporal spike and wave discharges during drowsiness.

Discussion

Certainly antiepileptic therapy is indicated for this patient, especially in the context of the abnormal EEG and the clinical history of likely focal seizures occurring as déjà vu events continuing. The patient is at risk of further generalized tonic-clonic seizures.

The challenge in this case is what the most appropriate medication to choose in the context of her wanting to become pregnant in the near future. Either with a diagnosis of epilepsy or taking prescription antiepileptic medications (AEDs), all females of childbearing potential should all be counseled. An increased risk of birth defects with all antiepileptic medications should be recognized. In addition, the risk of uncontrolled seizures should also be considered.

A practical and patient-based approach should be taken. A specific patient’s values should be accounted for in addition to a balance of risk and benefits of AEDs to both the mother and the fetus. More recently the data from several large pregnancy registries are becoming available to help guide on how to utilize AEDs during pregnancy.

The first principle should be to emphasize planning. When preparing for pregnancy the main message is twofold. Monotherapy if possible and lowest dose necessary to have adequate seizure control. The specifics of which medications are at lower risk of teratogenicity are seen when reviewing the results of the pregnancy registries. Patient’s should be encouraged to join a pregnancy registry to add data for exposures to specific medications. The general trend is that the risk of birth defect on AEDs is greater than the general population, but perhaps lower than previously estimated. Further data is becoming available regarding seizure control during pregnancy with different AEDs.

Other counseling that should take place is regards to safety. Local laws should be followed regarding driving. Some regions require health care providers to report to the appropriate authorities when an episode of unprovoked loss of awareness occurs. It is important for providers to know the local laws where they practice.

In addition, at least briefly discussing first aid during a seizure should be discussed. What a caregiver is to do during a seizure event is often misunderstood. Referencing reputable websites and/or advocacy groups can be very helpful to dispel any myths regarding response to seizures. Patients and caregivers should be given as specific as possible instruction as to when to call for emergency personnel. Typically, when seizures last greater than 5 minutes or when multiple seizures occur without return to an appropriate level of consciousness should be the trigger to call for help.

ACUTE AND CHRONIC EPILEPSY EXPLAINED IN 6 CASES

Matthew Hoerth

Status Epilepticus Case

A 20 year-old female presents to emergency department with altered mental status. The reports from emergency medical personnel who brought the patient to the hospital was that a convulsion occurred. When they arrived to the scene, they noted an obtunded patient. She was breathing spontaneously and oxygenating appropriately. Reportedly this was the first convulsion that was witnessed by the family, however over the past two weeks, she had a distinct change in her mood and personality. Past medical history is unremarkable, and there were no concerns from the family regarding alcohol or illicit drug use.

Several minutes after the arrival to the emergency department, approximately 30 minutes after the initial event, the patient had an additional generalized tonic-clonic seizure.

Discussion

This is a presentation of status epilepticus. Newer definitions of status epilepticus include the continuation of seizure activity greater than 5 minutes or multiple seizures occurring without return to baseline in between. Status epilepticus should be identified early as mortality rates increase with longer seizures. Convulsive status epilepticus can have thirty-day mortality rates from 19-27%, and non-convulsive status epilepticus can be up to 65%.

Initial management should be typical first aid to include airway, breathing, and circulation. Once that has been addressed, initial treatment typically includes a benzodiazepine. If this is unsuccessful after several adequate trials, a second line medication should be utilized. The use of continuous EEG monitoring is necessary to provide additional information regarding the seizure type, but more practically to follow the response to therapy. Workup needs to include laboratory evaluation and neuroimaging.

If two medications are utilized and status epilepticus continues, this is considered refractory status epilepticus. The level of evidence for use of any agent at this point declines, however many practical alternatives exist.

Another major determining factor for outcome in status epilepticus is etiology. In unidentified causes of status epilepticus and autoimmune etiology should be considered. Autoimmune neurologic antibodies can be measured in both the serum and cerebrospinal fluid. When appropriate, empiric therapy with immunosuppressant medications can be considered.