Complex Partial Seizures (CPS) are an epileptic seizure type that originates from a single area of the brain and cause impaired consciousness. During a seizure, people with CPS may make repetitive and purposeless movements called “automatisms,” which range from chewing, lip-smacking and picking at the air, to simple verbal responses and cycling movements of the legs. Approximately one-third of people with epilepsy are refractory, meaning their seizures are not completely controlled by treatment with two or more antiepileptic drugs (AEDs). Among patients with refractory CPS, adverse events can be significant, including an increased incidence of cognitive impairment, behavioral disorders, and accidents and physical injuries, including sudden unexplained death.

General Facts

- More than one-third of all patients with epilepsy have CPS, making it the most frequently occurring type of seizure.
- Complex partial seizures typically last from 30 seconds to two minutes, and are often preceded by a simple partial seizure, also called an aura. Dependent on the location of the seizure activity within the brain, auras can begin with an odd feeling in the stomach, a tingling sensation or visual changes.
- During a complex partial seizure, epilepsy sufferers are unaware of what they are doing and do not typically feel pain. They can also be affected by memory loss for periods before, during and after an epileptic episode. Complex partial seizures may also progress to generalized seizures, which affect the whole brain.
- Approximately one-third of all epilepsies are uncontrolled or refractory. Refractory seizures are generally defined as seizures that are uncontrolled in spite of treatment with two or more anti-convulsant therapies.
- As with other forms of epilepsy, patients with uncontrolled CPS are often faced with a loss of social interaction, productivity and positive self-image, and may experience potential changes in employment due to their inability to manage their condition.

Epidemiology

- While individuals with epilepsy already have a two to three times higher mortality rate than that of the general population, those who continue to suffer from uncontrolled seizures face a mortality risk that is up to seven times higher than the general population.
- In patients with refractory epilepsy, sudden unexplained death in epilepsy (SUDEP) accounts for up to 50 percent of all deaths.

Diagnosis and Treatment

- Results from electroencephalograms (EEGs) and magnetic resonance images (MRIs) can assist in diagnosing complex partial seizures and pinpointing the origin of the seizures.
The initial management of CPS focuses on the optimal use of AEDs. Patients with CPS who remain uncontrolled after trying two or more AEDs, either as monotherapy or in combination, are deemed refractory.

The adverse effects of epilepsy and its treatments are often magnified among patients with refractory epilepsy. These include: a higher incidence of cognitive impairment and behavior disorders; possible reduction in social interactions, productivity and self image; loss or change of employment; increased incidence of accidents and physical injuries; and higher risk of mortality. Subsequent invasive treatment options may be appropriate for some patients, though surgery of any type is considered a major undertaking requiring general anesthesia and subject to the possibility of small but significant risks such as infection. Even following surgery, many patients remain on AED therapies.

**Sources**


