Status Epilepticus Classification and Treatment

Status epilepticus is a succession of seizures (continuous seizure) lasting more than 30 min, or two or more seizures without full recovery of consciousness between any of the attacks.

It could be due to partial, complex partial, absence, tonic-clonic, or clonic.

Only the last 2 are life-threatening.

Clinical Features

The patient is not able to talk, the tonic phase is not clear and the patient appears in continuous clonic phase, the short tonic phases being difficult to see.
May be in respiratory embarrassment with cyanosis or may be hypoglycaemic.

Classification

Seizures have been broadly classified as either generalized or partial seizures by the International League Against Epilepsy.

In principle, there can be as many types of SE as there are types of seizures. This has led to complex classifications of SE. However, using electroclinical features, Status epilepticus may be classified broadly as convulsive SE and nonconvulsive SE.

Convulsive status epilepticus

Convulsive SE (CSE) can be further classified into

(a) Tonic-clonic SE,
(b) Tonic SE,
(c) Clonic SE and
(d) Myoclonic SE.

Generalized tonic-clonic SE is the most common form of SE.

Myoclonic SE presents as bilateral massive myoclonus, along with polyspike discharges on EEG, and usually carries a good prognosis.

But the myoclonic status that follows severe hypoxic-ischemic insult, viral encephalitis, and prion disease is associated with poor prognosis.

Nonconvulsive status epilepticus

Nonconvulsive SE (NCSE) refers to continuous or near-continuous generalized electrical seizure activity lasting for at least 30 min, but without physical convulsions.

CSE may evolve into the nonconvulsive form after treatment or NCSE may arise de novo.

NCSE is characterized by abnormal mental status, unresponsiveness, ocular motor abnormalities, persistent electrographic seizures, and possible response to anticonvulsants.

All patients with prolonged postictal confusion or unexplained coma should undergo EEG monitoring for confirmation.

NCSE has long been divided into two main categories:

1. Absence SE (ASE) and
2. complex partial SE (CPSE).

Until recently most cases of NCSE were considered to be ASE, and CPSE was thought to be a rarity.

The distinction between ASE and CPSE is an important one, as ASE is usually easier to treat and may not be associated with significant neuronal damage

Management of Status epilepticus

Supportive management

Place the patient by the side (lateral position). Do NOT attempt to put anything into the patient's mouth to stop the biting of the tongue. You are likely to cause more damage.

Pharmacological management

Give IV (not IM) diazepam 10mg STAT then infuse IV phenytoin 15–20mg/kg at a rate not exceeding 50mg/minute (for adults). Maintenance dose of 100mg 8 hourly. To be administered in normal saline.
If no response use IV phenobarbitone. Maintenance 300–500mg/day, preferably oral

Phenobarbitone second line after phenytoin. A loading dose of phenobarbitone 20mg/kg IV at a rate of 50–75mg/minute. If no response repeat at 5–10mg/kg. Maintenance 1–5mg/kg/day PO.

Rectal diazepam 10–20mg may be as effective as intravenous diazepam.
Use rectal solution at 0.5mg/kg.

Phenobarbitone should only be used where respiratory support is available