

STATUS EPILEPTICUS

Definition

No universal definition.

Seizures that persist for 20-30 minutes.

Operational definition - Continuous seizures lasting 5 minutes or longer or 2 or more seizures with incomplete recovery of consciousness in between.

Management

1. Assess airway control
2. Establish Monitor (BP/ SpO₂/temp)
3. IV cannula and check H's/tix
4. Give thiamine 100mg IV and 50ml D50 if hypoglycaemic



Anticonvulsant

Lorazepam 0.1mg/kg at 2mg/min

Phenytoin 20mg/kg IV (in saline at 50mg/min)

(Contraindicated in patients with 2^o and 3^o heart block)

seizures



Phenytoin additional 5-10mg/kg



Phenobarbitone 20mg/kg at 50mg/min



Phenobarbitone additional 5-10mg/kg



Midazolam/ Propofol/ Thiopentone

History / Physical Exam/ Investigations

Targeting at causes:

CNS – infection, stroke, trauma, chronic epilepsy

Metabolic – electrolytes, hypoxia, renal failure

Sepsis

Drugs

Alcohol

4 channel EEG available in our unit:

Consider continuous monitoring for patients:

- who remain unconscious after antiepileptic-drug treatment
- patients on paralytic agent (avoid using paralytic agents)
- Patients requiring midazolam/ propofol/ thiopentone infusion for status epilepticus

Watch out for complications of continuous seizures

- acidosis
- hyperthermia
- rhabdomyolysis
- cerebral damage
- avoid secondary cerebral damage (correct hyoxia, hypercarbia, hypotension, hypoglycaemia, hyperthermia)
- ♣ Note that the motor manifestation of status epilepticus becomes more subtle with time
- ♣ Patients can develop seizures on EEG with no motor manifestation clinically (nonconvulsive status)

Other points to note:

- ✚ Myoclonic jerks common after hypoxic insults.
Consider clonazepam/ valporate for treatment.
The jerks usually subside in 1-2 days time.
- ✚ Please read up on the side effects and drug interactions of anticonvulsants.
Anticonvulsants levels in our lab refer to the total bound and unbound drugs, however, it is the unbound level (free drug) that reflects the extracellular concentration in the brain and hence its effects and toxicity. Patients in ICU usually have low albumin level and hence the free drug level may actually be higher.

Reference:

1. Lowenstein DH, Alldredge BK. Status Epilepticus. *NEJM* 338:14:970-979.