STATUS EPILEPTICUS

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Resuscitate, terminate seizures and treat the underlying cause.

1. Perform ABC assessment, maintain airway and establish IV access as soon as practicable.
2. Call for skilled assistance and delegate immediately.
3. Give lorazepam 0.1 mg/kg IV or midazolam 10 mg IM (if no IV).
4. Check fingerstick BGL or give empiric glucose 25 g IV.
5. Start a conventional anti-epileptic drug intravenously.
6. If known hyponatremia, treat according to protocol [28].
7. If seizure stops, reassess, consider intubation and prepare using the intubation checklist [43].
8. If seizures continue 10 min after benzodiazepine, induce the patient and secure the airway with endotracheal tube.
9. Start a propofol or high dose midazolam infusion immediately.
10. Request laboratory screen and look for underlying cause.

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Definition
More than 5 min of convulsive seizure or multiple seizures without neurological recovery in between. Rapid control is necessary to limit any seizure induced neuronal injury and prevent respiratory compromise.

Causes
epilepsy, infective, hypoxic, vascular, metabolic, structural, physical (hyperthermia), drug induced or withdrawal effect, drug non-compliance

Lab screen
CBC, blood chemistry, BGL, ABG, toxicology screen, anticonvulsant levels, Ca and Mg.

When in doubt, intubate. The primary goals are terminating the seizure and stabilizing the patient. Intubation using anti-epileptic induction agents can achieve both.

Don't delay intubation while awaiting a conventional anti-epileptic drug. The anti-epileptic drug should be given as soon as possible. However, it may take 10-20 min to arrive from pharmacy and has limited efficacy in stopping the seizure.

Hypotension
Propofol is a powerful anti-epileptic agent, but can cause hypotension.
Before intubation, consider starting or preparing a vasopressor infusion (target pre-intubation SBP > 120 mmHg) [45]. For unmanageable hypotension use midazolam.

Conventional Anti-Epileptic Drugs	
Levtiracetam (KEPPRA)	60 mg/kg (max 4500 mg) IV over 10 min. Considered safest (including pregnancy).
Valproic acid	40 mg/kg (max 3000 mg) IV over 7 min. Well tolerated with proven efficacy. Contraindicated in liver disease and rare disorders causing hyperammonemia.
Anti-Epileptic Induction Regimen for Intubation	
1st Push	propofol 1.5-2 mg/kg
2nd Push	ketamine 2 mg/kg
3rd Push	succinylcholine 1.5 mg/kg or rocuronium 0.6 mg/kg
Anti-Epileptic Infusions	
Propofol infusion	load with 1.5-2 mcg/kg bolus start infusion at 80 mcg/kg/min (5 mg/kg/hr) continue infusion 50-110 mcg/kg/min (3-7 mg/kg/hr)
Midazolam infusion	load with 0.2 mg/kg (may re-load to max total 2 mg/kg) start infusion at 0.1 mg/kg/hr (range: 0.1-1 mg/kg/hr) may be more suited in hypotension.

Consider daily administration of thiamine.

Be aware of complications: aspiration, respiratory depression, neurogenic pulmonary edema, trauma and electrolyte abnormalities.