

MANAGEMENT OF STATUS EPILEPTICUS

Resuscitation.

- Airway & breathing management.
 - Avoidance of aspiration.
 - Maintenance of oxygenation.
 - Maintenance of adequate ventilation.
- C-spine precautions (only if trauma suspected).
- Haemodynamic support.
 - Intravenous access.
 - Low threshold for intraosseous access.
 - Fluid boluses (10-20mL/kg 0.9% Saline) for signs of shock/hypoperfusion.
- Rapid bedside glucose testing.

Investigations.

- Bloods (electrolytes, calcium/magnesium/phosphate, glucose)
- Urinalysis
- Anticonvulsant levels
- EEG
- Others;
 - 12-lead ECG (if toxicologic cause is of concern, eg. TCA overdose)
 - Cultures (blood / urine)
 - Lumbar Puncture (?meningoencephalitis)
 - Toxicology screen
 - CT-Brain (in setting of trauma or persistent focal findings).

Pharmacology.

- First line = **benzodiazepines.**

Drug	Dose
Midazolam	0.15 - 0.30 mg/kg [IV/IO] 0.5 mg/kg [buccal]
Diazepam	0.20 - 0.50 mg/kg [IV/IO] 0.50 - 0.75 mg/kg [PR]
Lorazepam	0.05 - 0.10 mg/kg

- Second line.

Drug	Dose	Precautions
Phenytoin (or fosphenytoin)	20 mg/kg [IV/IO]	Rate: 1 mg/kg/min [max 50mg/min] ** fosphenytoin can be given 3x faster ** Complications: bradycardia, hypotension
Phenobarbital	15-20 mg/kg [IV]	Long duration of action. Complications: sedation, respiratory depression, hypotension.
Sodium Valproate	~ 20-40mg/kg [IV] <i>Ideal dose not established</i>	Caution - hepatic failure / pancreatitis. Complications: Hyperammonaemia. Stevens-Johnson.
Levetiracetam	~ 20-40mg/kg [IV] <i>Ideal dose not established</i>	Well tolerated. Can cause agitation.

- Third line – typically involves proceeding to intubation...

Drug	Dose	Precautions
Thiopentone	3-5 mg/kg [IV]	Can accumulate in peripheral tissues
Propofol	Bolus: 1-3 mg/kg [IV] Infusion: 2-5 mg/kg/hr	Profound sedation & respiratory suppression. Caution: Infusions >5mg/kg/hr risk of <i>propofol infusion syndrome</i> .
Ketamine	Bolus: 0.5 - 2.0 mg/kg [IV]	Caution: bronchospasm, bronchorrhoea, HTN.
Midazolam	Bolus: 0.15-0.30 mg/kg Infusion: 0.10 mg/kg/hr (titrated)	Can accumulate in peripheral tissues
Suxamethonium	1-2 mg/kg	Caution: Hyperkalaemia (ideally check K+ on blood-gas first)
Rocuronium	0.6 - 1.2 mg/kg	Longer duration of action

- Specific treatments & antidotes.

Drug	Dose	Indication
Dextrose (10%)	2-5 mL/kg	Hypoglycaemia
3% Saline	3 mL/kg (over 30 mins)	Severe hyponatraemia
10% Calcium Gluconate	~ 0.3 mL/kg	Hypocalcaemia
Pyridoxine	70 mg/kg (max 5g)	Isoniazid overdose

Do NOT forget EMPIRIC ANTIBIOTICS for suspected SEPSIS / CNS infection.

Supportive Care.

- Analgesia & adequate sedation
- Maintain caloric intake
- Head up, dental hygiene, tube-suction [VAP prevention]
- DVT prophylaxis
- Pressure area care
- Family support & education