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EVALUATION AND MANAGEMENT OF STATUS EPILEPTICUS IN CHILDREN

At Arrival
0–5 min

***General measures*:**
Maintain airway, O_2 breathing (ventilation), and circulation (IV access). Quick history and examination, ask if on any AED.

Investigations
Take blood samples for CBC, sugar, calcium, magnesium, sodium, potassium, and ABG/ VBG.

Management—*IV preferable*
- Lorazepam 0.1 mg/kg (max 4 mg) or
- Diazepam 0.2–0.3 mg/kg (max 10 mg) or
- Midazolam 0.15–0.2 mg/kg (max 5 mg)

If IV access cannot be established then IM, intranasal, buccal, or rectal routes can be used

5 – 20 min

***General measures*:**
Shift to PICU if unstable. Watch for signs of raised intracranial pressure (ICP)—treat with mannitol / 3% NaCl

Management—*if seizures persist*
- IV phenytoin 20 mg/kg in NS @1 mg/kg/min or
- IV fosphenytoin 20 mg/kg of phenytoin equivalent (PE) @3 mg/kg/min with HR monitoring
- Can repeat IV phenytoin

30 – 60 min

***General measures*:**
Watch for raised ICP, rhabdomyolysis, cardiac arrhythmia, sepsis, and hypersensitivity to AED. Monitor for organ function.

Management—*if seizures persist*
- IV valproate 20–40 mg/kg or
- IV phenobarbitone 20 mg/kg in NS @ 2 mg/kg/min or
- IV levetiracetam 20–60 mg/kg @ 5 mg/kg/min
  Start maintenance dose after 8–12 hours

1–24 hours: Refractory status epilepticus

***General measures*:**
Shift to PICU, start bedside EEG, if available, to titrate dose of infusion

Investigations
SF for neuroinfections, MRI brain ± contrast, and CT brain, if unstable. Autoimmune panel, metabolic and genetic studies based on clinical suspicion.

Management—*general anesthetics to achieve burst suppression*
- Midazolam—0.2 mg/kg IV bolus followed by infusion @1 µg/kg/ min, increasing 1 µg/kg/min, every 5–10 minutes, till seizures stop, up to a maximum of 30 µg/kg/min, tapering initiated after 24 hours of seizure control @ 1 µg/kg/min, every 3 hours Or
- High-dose phenobarbitone: 5–10 mg/kg boluses every 30 minutes up to 120 mg/kg over 24 hours, target seizure control and burst suppression, maintenance up to 40 mg/kg/day Or
- Propofol loading dose of 1–2 mg/kg, followed by continuous infusion of 1–2 mg/kg/h, maximum of 5 mg/kg/h Or
- Thiopentone loading dose 5 mg/kg bolus followed by 3–5 mg/ kg/h infusion rate to achieve burst suppression followed by tapering after 24 hours seizure free period.
- Topiramate through orogastric/nasogastric tube (2–5 mg/kg enteral loading, increase by 5–10 mg/kg/day up to maximum of 25 mg/kg/day) while tapering anesthetic agents. Ketamine can also be tried.

- Avoid phenobarbitone if facility for mechanical ventilation is not available; Avoid valproate if suspected inborn error of metabolism or liver dysfunction (levetiracetam is the preferred
- In known cases of epilepsy with breakthrough seizures, avoid loading doses. Give maintenance dose.