

Status Epilepticus



Refer EARLY to KIDSNTS for advice - 0300 200 1100

Definition:

- **Status epilepticus (SE)** is a condition resulting either from failure of the mechanism responsible for seizure termination or from the initiation of mechanisms, which lead to abnormally prolonged seizures (>5mins).
- **SE** is a condition, which can have long-term consequences including neuronal death, neuronal injury and alteration of neuronal networks, depending on the type and duration of seizures.
- Management of non-convulsive status epilepticus and super refractory status epilepticus are beyond the scope of this guideline.

Causes

- **Most common:** Febrile convulsions; Known epilepsy (treatment cessation/alteration)
- **Cerebral causes:** CNS Infections; Trauma (NAI); Cerebral bleed/infarct; Blocked VP shunt; Space-occupying lesion
- **Systemic causes:** Hypoxia; Metabolic (Hypoglycaemia, Hyponatremia, Hypocalcemia, Hyperammonaemia, Hepatic encephalopathy); Toxins; Systemic hypertension.

Cautions

- Treat blood glucose urgently (if < 3mmol/L)
- Risk of seizures becoming refractory increases with increasing seizure duration
- Phenytoin administered rapidly may cause severe bradycardia and/or asystole
- Monitor serum sodium and treat if < 125mmol/L
- Aim for temperature < 37°C

Follow APLS algorithm on management of the convulsing child
 See following page for the latest algorithm
 (follow individual emergency plan if the child has one)

General management principles

- **Manage Airway, Breathing, Circulation** whilst terminating seizure
- Treat hypoxia and hypotension
- Beware of cardiovascular instability and consider choice of medications (e.g. caution with Phenytoin/Thiopentone/Propofol)
- Treat suspected infection with antibiotics/antivirals
- Consider and treat correctable causes urgently (don't forget glucose and electrolytes)



Investigations

- Blood glucose and blood gas
- FBC, urea and electrolytes, calcium, magnesium, CRP; consider ammonia and/or toxicology screen
- Blood pressure to exclude malignant hypertension
- Anti-Epileptic Drugs levels (if appropriate)
- *CT Brain if focal seizure/neurology, trauma or suspected space occupying lesion or VP shunt blockage (consider if contrast of venous phase indicated)*
- Lumbar puncture – contraindicated in the fitting child



Rapid Sequence Induction

- Call KIDS NTS if progressing to RSI for seizure management or respiratory depression/low GCS following seizure termination
- MDT decision post intubation: **local extubation vs retrieval to tertiary centre**
- Decision making will consider respiratory parameters, cardiovascular stability, neurological stability
- Consider short-acting sedation (eg propofol 1-4mg/kg.hr) if transfer to CT is required



Refractory Status Epilepticus

- Discuss with Neurology Consultant if seizures are not terminated after RSI
- Load with which ever agent has NOT been used above: Levetiracetam/Phenytoin/Phenobarbitone
- Recheck Sodium and Glucose and treat accordingly (use 3-5ml/kg hypertonic 2.7% Saline)
- Consider Midazolam infusion: Bolus 0.1-0.5mg/kg (max 10mg) & start infusion at 2 microgram/kg/min
- Monitor for hypotension and avoid muscle relaxation (masks seizures)

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