NHS Children's Acute Transport Service

Clinical Guidelines

Status Epilepticus

Document Control Information

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Applicable to	**All CATS employees**		

1. Assessment

- Aetiology
  - Febrile convulsion
  - Known epileptic + acute illness
  - Meningoencephalitis
  - Metabolic/electrolyte abnormality (glucose, calcium)
  - Drug, intoxication, poisoning
  - Stroke
  - Trauma (including NAI)
- Duration of fitting
- Nature of fit (generalised or focal)
- Treatment given

2. Initial management

2.1 Ensure patent airway

2.2 Give 100% oxygen

2.3 Check glucose before giving anticonvulsants. Check urea, electrolytes, calcium and magnesium. Consider blood cultures if child had fever. Consider taking early urine sample for toxicology.

2.4 Stop seizures using the APLS protocol shown below. **Give enough time for drugs to work to avoid respiratory depression from benzodiazepine overdose.**

2.5 Maintain normothermia. Treat fever with paracetamol +/- ibuprofen and cooling.

2.6 Ceftriaxone (cefotaxime for age <1 year), acyclovir and erythromycin are recommended if aetiology is uncertain (ie meningo-encephalitis is a possibility) and acyclovir should be used for focal fits of unknown cause.

2.7 Consider mannitol 0.25g/kg and/or 3ml/kg 3% or 2.7% NaCl (aim Na 145 mmol/l) if signs of raised intracranial pressure (bradycardia, hypertension, pupillary signs).

2.8 ***Lumbar puncture should never be performed in a child with a reduced level of consciousness.***

2.9 Consider CT scan +/- contrast if seizures atypical, focal or aetiology uncertain.

3. Indications for intubation

3.1 Child in refractory convulsive status epilepticus after completion of iv phenytoin/ iv phenobarbitone.

3.2 Airway compromised at any time.

3.3 Glasgow coma score remains <8.

3.4 To establish neuroprotection (CO2 control) in a child requiring a CT scan and pending results.

4. Management of the child requiring intubation

4.1 Rapid sequence induction with thiopentone and suxamethonium (if no hyperkalemia, myopathy or kidney injury).

4.2 Insert NGT if not already in situ. Place on free drainage.

4.3 Initiate infusions of morphine and midazolam once ETT in situ.
NB Midazolam IVI is useful as an anticonvulsant.

4.4 If seizures continue consider further administration of thiopentone (discuss with CATS consultant on call).

4.5 Give iv fluids at 60% maintenance.

5. Transport considerations

Not all children who require intubation (particularly those intubated for temporary respiratory depression after benzodiazepines) will require transfer to a PICU.

5.1 Ventilate to normocarbia (neuroprotection strategies).

5.2 Infusion or bolus drugs for breakthrough seizures available en route (benzodiazepines, thiopentone).

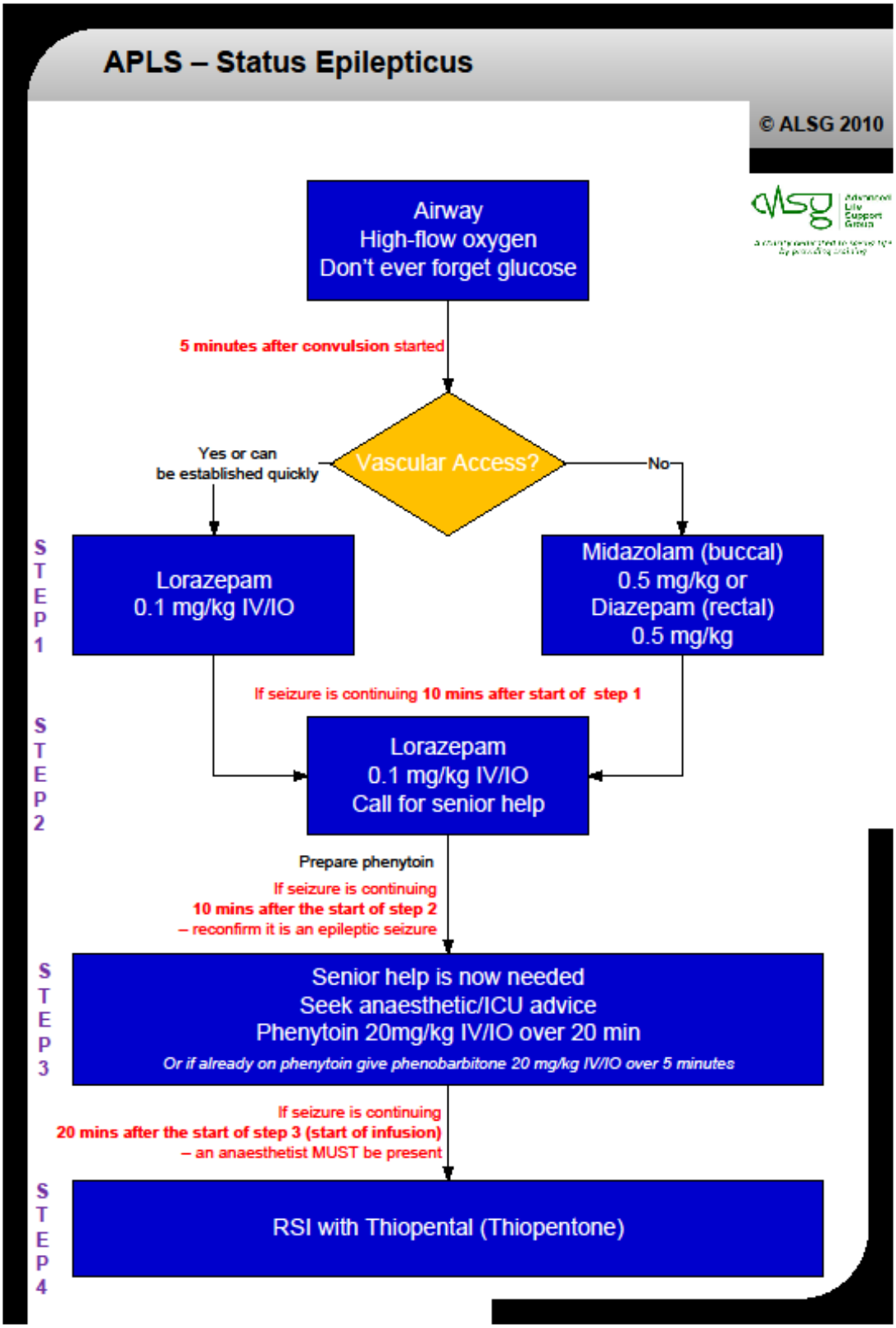
5.3 Monitor glucose.

5.4 Consider mannitol/ 3% NaCl if signs of raised ICP (bradycardia, hypertension, pupil changes).

5.5 Paralysis to assist ventilation or prevent ETT being coughed out during transport.

5.6 Take copies of CT scans or send them electronically if these have been performed.

5.7 Prepare Dopamine if Thiopentone IV infusion is instigated.


APLS – Status Epilepticus
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Airway
High-flow oxygen
Don't ever forget glucose
5 minutes after convulsion started
Vascular Access?
Yes or can be established quickly
No
STEP 1
Lorazepam
0.1 mg/kg IV/IO
Midazolam (buccal)
0.5 mg/kg or
Diazepam (rectal)
0.5 mg/kg
If seizure is continuing 10 mins after start of step 1
STEP 2
Lorazepam
0.1 mg/kg IV/IO
Call for senior help
Prepare phenytoin
If seizure is continuing
10 mins after the start of step 2
– reconfirm it is an epileptic seizure
STEP 3
Senior help is now needed
Seek anaesthetic/ICU advice
Phenytoin 20mg/kg IV/IO over 20 min
Or if already on phenytoin give phenobarbitone 20 mg/kg IV/IO over 5 minutes
If seizure is continuing
20 mins after the start of step 3 (start of infusion)
– an anaesthetist MUST be present
STEP 4
RSI with Thiopental (Thiopentone)