

Guidelines for the management of convulsive status epilepticus in children 0-18 years

Guideline to be used where appropriate in conjunction with the Ashford and St Peter's phenytoin infusion guideline 2016

Indication for use: Status Epilepticus in Children aged 0-17 years

Definition of Status Epilepticus:

Generalised convulsive status is defined as a generalised convulsion lasting 30 minutes or longer, or repeated tonic-clonic convulsions over a 30 minute period WITHOUT recovery of consciousness between each convulsion.

Any child who presents with a tonic-clonic convulsion lasting more than 5 minutes should be managed in the same way as a child in established status.

Cautions: Lorazepam, midazolam and phenytoin are controlled drugs

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CONVULSIVE STATUS EPILEPTICUS 0 – 18 YEARS

Generalised convulsive status is defined as a generalised convulsion lasting 30 minutes or longer, or repeated tonic-clonic convulsions over a 30 minute period WITHOUT recovery of consciousness between each convulsion.

Any child who presents with a tonic-clonic convulsion lasting more than 5 minutes should be managed in the same way as a child in established status as per the following table:

TIME	MANAGEMENT	FURTHER ACTIONS	WHEN SEIZURE TERMINATES
0 mins 1 st step	Check ABC High flow O2 if available Blood glucose	Confirm clinically that it is an epileptic seizure	
5 mins 2 nd step	Buccal midazolam 2.5mg <1yr 5mg 1-5yrs 7.5mg 5-9yrs 10mg >10yrs OR Lorazepam 0.1mg/kg if IV access Check blood gas and electrolytes, calcium, magnesium, CRP, ammonia, toxicology. Keep re-assessing ABC	Midazolam may be given by parents, carers, school or ambulance in the community. Be aware that rectal diazepam may have been given in lieu of buccal Midazolam in some cases.	Check ECG Discuss brain imaging with senior if focal If afebrile refer to first seizure clinic If known to have epilepsy please inform their epilepsy consultant If febrile look for focus of infection; discuss need for LP with senior in <1yr Start treatment for infection as required.
15 mins 3 rd step	Lorazepam 0.1mg/kg IV or IO	Call for senior help Re-confirm it is an epileptic seizure Start to prepare Phenytoin for next step. Please note we	As above

		give Phenytoin diluted .	
25 mins 4 th step	Phenytoin 20mg/kg by slow intravenous infusion via syringe driver over 20 mins with cardiac monitoring. Give DILUTED; see separate Phenytoin guidelines . OR (if on regular Phenytoin) Phenobarbitone 20mg/kg IV over 5 mins	Paraldehyde 0.8mls/kg (we have the ready diluted form) may be given PR after the start of Phenytoin infusion, under direction of senior staff. Inform senior anaesthetic team. Inform STRS.	As above. If Afebrile or Febrile refer to 1 st seizure clinic.
45 mins 5 th step	Rapid sequence induction of anaesthesia using Sodium Thiopentone 4mg/kg IV	Transfer to paediatric intensive care via STRS	

If a patient is known to have epilepsy please check anti-convulsant levels where appropriate.

If a patient is having a cluster of seizures but recovering consciousness between seizures it may be necessary to give benzodiazepines as per the above table – always discuss with a senior colleague. The use of Phenytoin in the treatment of a cluster of seizures WITH recovery of consciousness can also be considered if IV Lorazepam has been ineffective in terminating the cluster – always discuss with a senior colleague.

The treatment of Non-convulsive status is less urgent than for convulsive status. The diagnosis can be difficult and, where possible, it should be clarified by urgent EEG monitoring. If NCS is confirmed then the intravenous benzodiazepine protocol above can be followed. Where possible, a repeat EEG after the administration of IV benzodiazepines is very useful. Always discuss with a senior colleague.

References:

NICE Guidance – Epilepsies: diagnosis and management; Appendix F Protocols for treating convulsive status epilepticus in children.

South Thames Retrieval Service Paediatric Critical care – Status epilepticus guideline Aug 2015; STRS.nhs.uk

Discussed and ratified in paediatric meeting on Friday 9th September 2016

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Kate Irwin: July 2016