Status Epilepticus Care Guideline

CHOC Children's

Inclusion Criteria: Children > 1 month of age with a seizure lasting longer that 5 minutes in duration.

Exclusion Criteria: Children < 1 month of age

Immediate Assessment/Intervention

- Initiate airway support (insert nasal airway or intubate if necessary), begin nasal oxygen
- Vital signs, temperature, continuous cardio-respiratory monitor
- Obtain history, perform neuro exam
- Establish IV line, begin isotonic saline infusion at a low rate
- Consider 50% glucose IV and Thiamine IV or IM in an older child
- Lab (prior to any antiepileptic drug, if possible): electrolytes, CMP, magnesium, toxicology screen, ABG, blood glucose (do not delay antiepileptic drug administration)
- If patient is already on antiepileptic drug obtain STAT level of the drug then load with IV form (if IV form is available)
- Remain NPO and initiate seizure precautions
- If new onset, consider basic metabolic work up: urine organic acids qualitative, serum acetoacetate, lactic acid, pyruvate level, carnitine free and total, acylcarnitine profile
- Notify Neurology as soon as possible, general neurology team will notify Epilepsy attending to start VTM if indicated
- Arrange for PICU admission

Recommendations/ Considerations

- Most seizures in children last for less than 5 minutes. However, if a seizure lasts greater than 5 minutes, it is likely to last over 30 minutes. Therefore, it is recommended that seizures lasting greater than 5 minutes be treated as status epilepticus.
- The underlying cause of status epilepticus is considered to be the most important determinant of outcome; the morbidity may be less in those with febrile and unprovoked status epilepticus
- Children treated more aggressively and those with shorter episodes of status epilepticus are less likely to develop subsequent neurological deficits

If seizure persists for 0-5 minutes

Administer Lorazepam:
0.1 mg/kg IV (Max 2 mg, if > 40 kg, max 4 mg)

May give 2nd dose after 5-10 minutes

If seizure persists 5-10 minutes

Administer Fosphenytoin
20 mg/kg IV, may give additional 7 mg/kg if seizure continues

If seizure persists 10-15 minutes

Administer Phenobarbital 20mg/kg IV

Refractory Status Epilepticus

If seizure persists 15-20 minutes

Administer Phenobarbital additional loading dose 20 mg/kg IV

If seizure persists > 20 minutes

Discuss with Epilepsy Attending

- Pentobarbital
- Midazolam
- Propofol

Admit to PICU

Intubate, invasive monitoring, central line, foley catheter (as clinically indicated)

A Pediatric Epileptologist and continuous video telemetry (VTM) must be involved with any of these IV procedures

Infusion Coma: IV bolus followed by continuous infusion to achieve burst suppression using continuous EEG monitoring.
Begin **Pentobarbital** with 5-10 mg/kg IV initial dose with repeated boluses until burst suppression followed by an infusion at 1 mg/kg/hr. Increase infusion rate by 0.5 mg/kg/min to achieve burst suppression
OR
Begin **Propofol** with 2 mg/kg loading dose, followed by infusion at 25 mcg/kg/min. Increase infusion rate by 10 mcg/kg/min to achieve burst suppression with suggested (Max 100 mcg/kg/min)
OR
Begin **Midazolam** at 0.05 mg/kg/hr continuous infusion. Increase infusion rate by 0.05 mg/kg/hr to achieve burst suppression with suggested (Max 0.2 mg/kg/hr)

Approved Evidence Based Medicine Committee 6-20-12, revised 11-25-15; 7-17-19

Reassess the appropriateness of Care Guidelines as condition changes and 24 hours after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The provider should deviate from the guideline when clinical judgment so indicates.

References
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Cook AM. Status Epilepticus. Neurocritical Care Technology in the ICU. American College of Clinical Pharmacy; CCSAP 2017, Book 3.

Glauser R, Shinnar S, et al. Evidence-Based Guideline: Treatment of Convulsive Status Epilepticus in Children and Adults: Report of the Guideline Committee of the American Epilepsy Society. Epilepsy Currents, 2016 Jan-Feb; 16(1): 48-61. doi: 10.5698/1535-7597-16.1.48

Lee J, Huh L, et al. Guideline for the Management of Convulsive Status Epilepticus in Infants and Children. BC Medical Journal, July/August, 2011, 53(6): 279-285. http://www.bcmj.org/articles/guideline-management-convulsive-status-epilepticus-infants-and-children

Riviello JJ, Hirtz AD, et al. Practice Parameter: Diagnostic Assessment of the Child with Status Epilepticus, an Evidence-Based Review: Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society. Neurology, 2006; 67: 1542-1550. http://www.neurology.org/cgi/content/full/67/9/1542

Status Epilepticus Supplement – Update. Epilepsia. 2018; 59(52): 67-248. https://onlinelibrary.wiley.com/toc/15281167/2018/59/S2

Trinka E, Cock H, Hersdorffer D, et al. A definition and classification of status epilepticus – Report of the ILAE Task Force on Classification of Status Epilepticus. Epilepsia 2015; 56(10): 1515-1523. https://doi.org/10.1111/epi.13121