Neurology Department Royal Derby Hospital

Status Epilepticus in Adults - Summary Clinical Guideline

A guideline for the management of convulsive status epilepticus

SEIZURE (0-5 MINS)

ABCDE
IV access + BM + Bloods
Correct reversible causes
ECG
Review diagnosis
Refer to checklist once seizure stops

NON EPILEPTIC ATTACK

- Reassure & observe
- Monitor vital signs
- Avoid use of benzodiazepines
- Review history/notes

- If uncertain, discuss with on call neurology team
- Consider EEG

EPILEPTIC SEIZURE

EARLY STATUS (5-10 MINS)

- IV LORAZEPAM 4 mg (in frail/elderly, give 2mg)
- If no IV access, give IM LORAZEPAM 2-4 mg OR Buccal/IM MIDAZOLAM 10 mg OR PR DIAZEPAM 10 mg
- Repeat once if no response after further 5 minutes

ESTABLISHED STATUS (10-30 MINS)

IV LEVETIRACETAM 60mg/kg (max 4500 mg) over 10 minutes

OR

IV SODIUM VALPROATE 40 mg/kg (max 3000 mg) over 10 minutes

Avoid *in female of child bearing age, liver and mitochondrial disease*

Caution *in all male and female patients under 55 years (see full guideline)*

OR

IV PHENYTOIN* 20 mg/kg (max 50 mg/min) **use IBW

(cardiac monitoring recommended)

REFRACTORY STATUS (>30 MINS)

- Critical care input for general anaesthesia
- IV Midazolam or propofol or thiopentone infusion
- Discuss with on call neurology team

SEIZURES STOP

CHECKLIST:

- If haemodynamic concerns, discuss with ICU
- Prescribe maintenance dose epilepsy medication after the initial loading dose (NOTE: oral valproate maintenance requires discussion with neurologist for all patients <55 years)
- Ensure usual epilepsy medications prescribed accurately
- Prescribe PRN lorazepam/midazolam/diazepam
- If oral route unavailable, use IV +/- NG
- Investigate the cause
- Urgent brain imaging especially if lateralising neurological deficits or no history of epilepsy
- If intracranial infection suspected, cover with appropriate antimicrobials and perform LP
- Start a seizure chart
- Discuss ALL patients with neurology

* A lower loading dose maybe necessary in patients already on phenytoin, please discuss with neurology

**IBW (ideal body weight)

Males: IBW = height (cm) - 100
Females: IBW = height (cm) – 105

Introduction

Epilepsy is one of the most common neurological conditions. Recurrent seizures can adversely affect mood and cognition, and may even lead to injuries, or death. In the UK, there are an estimated 1000 deaths per year related to epilepsy[1]. Therefore, effective seizure management is essential. Convulsive status epilepticus is a clinical emergency. It is defined as continuous or recurrent seizures without recovery of consciousness for more than 5 minutes. It carries a high risk of mortality and morbidity. Early recognition and treatment are keys to minimising complications.

Key Points:

- Not all that shakes are epileptic in nature. Consider the possibility of non epileptic attacks.
- All patients presenting with seizures require IV access, and are prescribed PRN IV/IM Lorazepam 2-4 mg or Buccal/IM Midazolam 10 mg or PR 10 mg diazepam.
- For patients with known epilepsy, please prescribe their usual epilepsy medications correctly. Missed doses is a common causes of uncontrolled or breakthrough seizures in the hospital.
- Prescribe and start maintenance dose of epilepsy medication 4-8 hours post loading dose.
- If oral route is unavailable, please use alternative routes, such as IV +/- NG route. Please refer to the list of epilepsy medication below for additional information or consult pharmacy.
- Always investigate for the cause of the seizures, for example:
    - Alcohol withdrawal (start Pabrinex as per hospital protocol)
    - Electrolyte abnormalities (watch out for hypoglycaemia – treat according to hospital guideline)
    - Infection
    - CNS tumours/inflammation
    - Non compliance
    - Toxins/illicit drugs
    - Venous sinus thrombosis

- Discuss all patients in status epilepticus with the on call neurology team.
- Record all seizures that have been witnessed in the case notes or seizure chart. Describe them as accurately as possible.
- Collateral history regarding seizure semiology and frequency is very helpful. Try your best to gather this information.
- Urgent brain imaging is required if there are lateralising neurological deficits or no prior history of epilepsy.
- Cover with the appropriate antimicrobials if concerned re: CNS meninigits/encephalitis/abscess.
- Maintain a seizure chart on the ward.
- Basic blood investigations should include FBC, UE, LFT, calcium, glucose, CRP, ABG/VBG +/- drug level (if concerned on non-compliance; phenytoin blood level is helpful to guide whether top up dose is required).