Derby Hospitals NHS Foundation Trust

Clinical management of Status Epilepticus on the Intensive Care Unit

Reference No:

Introduction

Status Epilepticus is a life-threatening condition characterised by continuous seizure activity lasting 30 minutes or intermittent seizure activity lasting 30 minutes during which consciousness is not regained.

Aim and Scope

To ensure effective clinical management of patients with Status Epilepticus in the ICU.
Patients will be admitted to ICU having already commenced treatment for seizure activity, therefore these guidelines should be used in conjunction with the appropriate ward guidelines for the management of seizures.

Abbreviations Used

ICU – Intensive Care Unit
CVP – Central Venous Pressure
ECG - Electrocardiogram

Implementing the Policy

Prolonged seizure activity can increase the likelihood of neurological damage.

Treatment of these patients must proceed at a fast pace. The principles of treatment are:-

1. Emergency medical treatment
2. Identification, investigation and management of aetiological factors
3. Drug treatment of the seizures

Emergency Medical Management

Monitor and maintain airway and breathing. If necessary intubate using standard rapid sequence induction with Thiopentone.

Monitor and maintain the circulation – ECG monitoring, arterial line, CVP, fluids and assessment of cardiac output. Inotropes are given as required. If the patient is intubated and ventilated, avoid using non-depolarising relaxants if possible.

Blood screen for electrolytes, toxicology screen and liver function tests

Blood glucose should be measured as early as possible to identify hypoglycaemic seizures. If blood sugar is low, 20% Dextrose 200ml is infused stat

If patient has pre-existing epilepsy, levels of current anti-epileptic drug therapy should be measured.

Identify Causes

A careful history should be taken. Physical examination may reveal a systemic or neurological cause.

Further investigations may be needed. Consideration should be given to performing CT and/or MRI head, lumbar puncture, blood cultures and full infection screen.

Drug Treatment

Drug treatment should proceed immediately and in parallel with resuscitation and airway management Patients may already have been commenced on drug therapy before being referred to ICU.

The first line drug treatment is Lorazepam 0.1mg/kg/IV given in 2 mg increments over ten minutes.

The second line treatment is Phenytoin 20mg/kg/IV loading dose over 30 minutes, followed by maintenance dose of 100mg every 6-8 hours (blood levels of 40 – 80 µg/litre are therapeutic).

If fitting has not been controlled at this stage the patient should be intubated and ventilated. Sedation with Midazolam 1-10 mg/hr and propofol 50-300 mg/hr should be commenced.

If fitting is still not controlled at this stage Thiopentone infusion should be commenced (loading dose of 5mg/kg followed by an infusion of 100-300 mg/hr).

Implementing maintainance doses of anti epileptic drugs e.g. Sodium Valproate, may be necessary at part of the weaning process in ICU.

References

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