AUDIT ON THE MANAGEMENT OF PROLONGED EPILEPTIC SEIZURES IN THE COMMUNITY AND HOSPITAL SETTING

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“Time is Brain” (1). Status epilepticus (SE) in children is associated with mortality and morbidity (2). Treatment of prolonged epileptic seizures in non-hospital setting can be challenging; however timely intervention has been shown to reduce the incidence of prolonged seizures and improve neurological outcome (3).

Aims: To look at the management of prolonged seizures (SE) in the community in our local area (Torquay and South Devon) and subsequent treatment in hospital setting (Torbay Hospital)

Standards: We audited the standards of care as per APLS guidance (4) on SE and NICE 2012 Epilepsy Guidelines (5).

Data Collection: We looked at the admissions for SE to Torbay Hospital between October 2015 and October 2016. 17 admissions (15 different children) were retrospectively analysed.

Findings:
- In all, except one case, initial rescue medication was given in the non-hospital setting. 6 patients (30%) received buccal midazolam, 7 (40%) rectal diazepam, 1 rectal Paraldehyde, 2 IV Diazepam.
- In all cases parents administered buccal Midazolam, even if ambulance crew was present.
- In 6/17 patients (30%) rescue medication was given at \( \leq 10 \) minutes
- Mean length of time from beginning of seizure to rescue medication was 15 minutes.
- 13/17 received a second benzodiazepine; 4/13 received the second dose in transit.
- Only 2 patients had the second dose within 10 minutes from first.
- Mean length of time from first to second dose of benzodiazepines was 35 minutes.
- Mean total length of seizures was 85 minutes.

Outcome:
- We have updated the individual emergency plans for those patients who have experienced prolonged seizures (> 5 minutes), giving advice on when to give a second dose of benzodiazepines.
- Preliminary re-audit results of 4 episodes of SE in the same children have shown appropriate timing of the first and second dose of benzodiazepines in the community in all 4 episodes, and administration of step 3 medications within a mean of 40 minutes from start of the seizure. This confirms that clear emergency protocols and training of carers can be effective.

References
1. Trinka et al., 25 years of advances in the definition, classification and treatment of status epilepticus. Seizure 44: 65-73, 2017
2. K. Ostrowsky et al., Outcome and Prognosis of Status Epilepticus in Children. 2010: Semin Pediatr Neurol 17:195-200