

Acute management of seizing patients: a quality improvement project

Authors: Saima Khurshid,^A Tawfik Rajab^A and Ummulbaneen Shamji^A

Introduction

Seizures are a frequent occurrence among hospitalised patients and they were identified in approximately 3.6% of total hospitalisations.¹ Data from Northampton General Hospital suggested that 30 patients per week were at risk of having a seizure. Junior doctors working in an emergency setting with little experience, under the expectation to act in seconds, may miss vital steps and make irrational decisions.

Aim

To provide high-quality education for junior doctors in developing a comprehensive and clear approach to managing a seizing patient and bridging any knowledge gaps. To provide a more supportive and safe practice in a peri-arrest scenario of a seizure.

Materials and methods

An assessment tool (Fig 1) was produced using National Institute for Health and Care Excellence (NICE) guideline CG137, by which 24 junior doctors working in acute medicine were assessed to determine their level of knowledge on managing a mannequin simulating a seizure.² Based on the first cycle result, a bundle on seizure management was approved and introduced in the trust. A post-intervention assessment was conducted using the same assessment tool. Data were analysed using MS Excel to compare pre- and post-intervention knowledge on managing a seizure and detect any improvement.

Results and discussion

65% of junior doctors checked the airways during the pre-assessment versus 100% post-intervention. In addition, pre-intervention 56% and 48% attached the patient to high-flow oxygen and placed the patient in the recovery position, compared with 89% in both areas post-intervention. 21% checked glucose pre-intervention versus 100% post-intervention. 60% considered reversible causes such as electrolyte imbalance and alcohol withdrawal as part of management, in comparison

Author: ^AUniversity Hospitals of Northamptonshire NHS Group, Northampton, UK

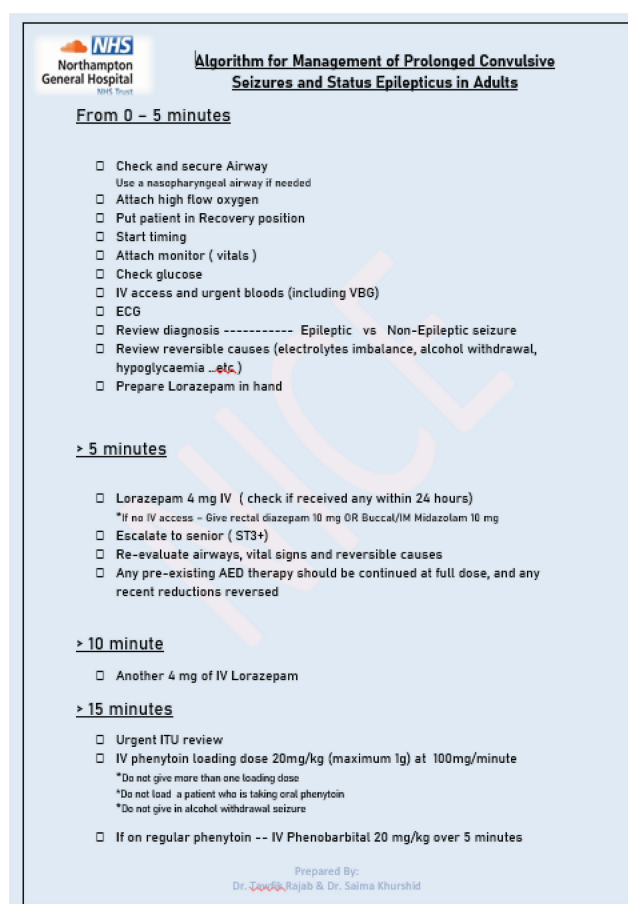


Fig 1. Algorithm for management of prolonged convulsive seizures and status epilepticus in adults.

to 90% after the intervention. A significant improvement was noted in the timing, dosage, indication and choice of drug to abort the seizure post-intervention. Approximately one-third of junior doctors escalated to senior and/or ITU colleagues after 5 minutes of the simulated seizure, versus 97.5% after the intervention. Pre-intervention, none of the doctors were aware of use of second-line medications in status epilepticus, compared with 83.5% post-intervention.

Conclusion

Based on our findings, a remarkable improvement was observed in junior doctors' knowledge and confidence in managing a seizing patient. This is essential for having a positive impact on patient safety and care. ■

References

- 1 Fields MC, Labovitz DL, French JA. Hospital-onset seizures: an inpatient study. *JAMA Neurol* 2013;70:360–4.
- 2 National Institute for Health and Care Excellence. *Epilepsies: diagnosis and management: Clinical guideline [CG137]*. NICE, 2020. www.nice.org.uk/guidance/cg137 [Accessed 21 March 2022].