

# Status epilepticus: Are we over-investigating?

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## INTRODUCTION

Convulsive status epilepticus (CSE) is defined by a seizure lasting over 5 minutes or recurrent seizures without return to the child's baseline in between the seizures<sup>1</sup>. Children with CSE are commonly admitted to the Paediatric intensive care unit (PICU).

There are several causes for CSE with febrile convulsions and seizures in known epileptic children being among the commonest. Other causes include central nervous system infections, traumatic brain injury, acute hypoxic-ischaemic events, cerebrovascular events, space occupying lesions, and blocked ventriculoperitoneal (VP) shunts.

Our regional guidelines, similar to many other guidelines across the UK, suggest performing a computed tomography (CT) of the head for those presenting with focal seizures, focal neurology, history of trauma, suspected space occupying lesion, or suspected blocked VP shunt. Those with suspected intracranial infection should be started on antibiotics +/- antiviral medication.

## AIM

We evaluated the proportion of patients that were managed with antibiotics, antivirals, and CT head.

## METHODS

All children presenting with status epilepticus to a single centre PICU (Cardiff, UK) over a four-year (2017 - 2020) period were included. Data were gathered from electronic patient records. Patients with insufficient data were excluded.

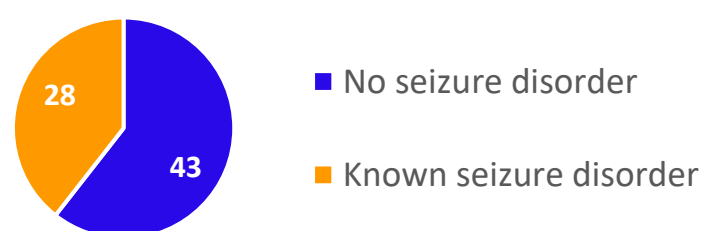
## RESULTS

### The patients

Total: 71

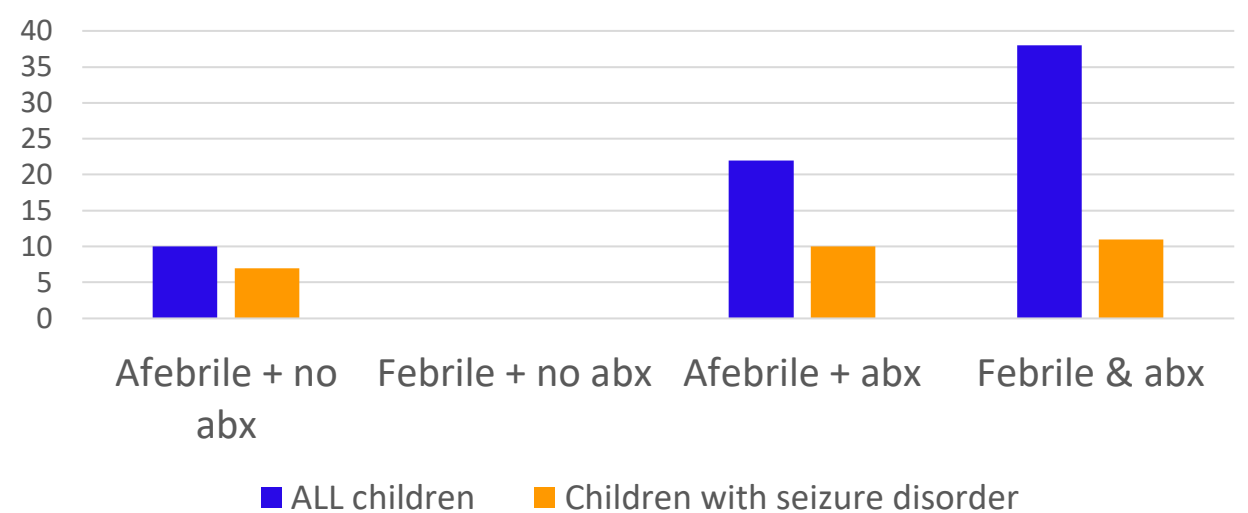
Median age: 2 yrs (range 5 months – 15 years)

Known seizure disorder on admission? 39%



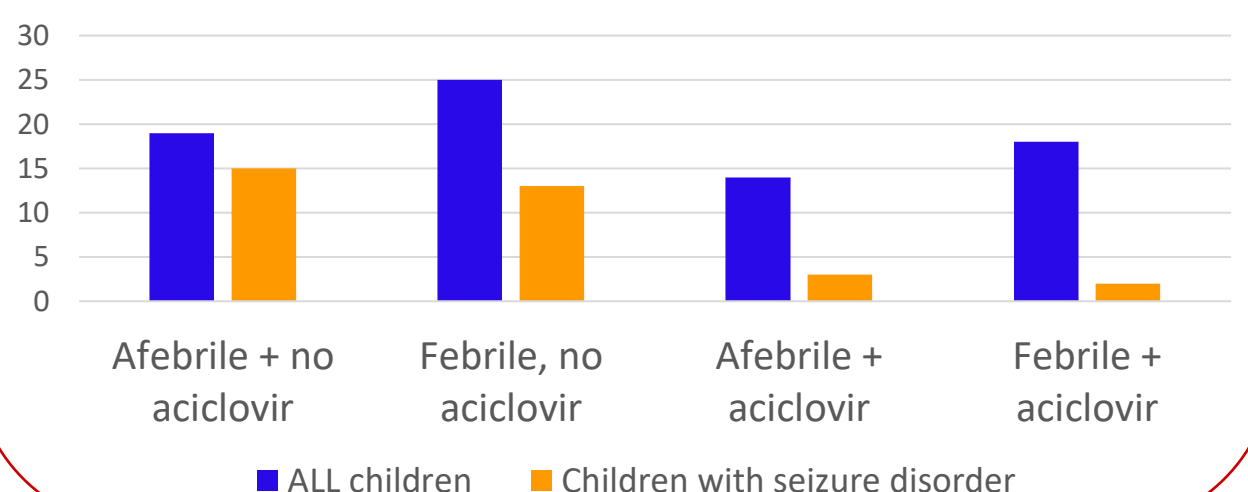
### Antivirals and Antibiotics

#### Antibiotic use in children presenting with CSE



61 (86%) received broad-spectrum antibiotics of which 38 (62%) were febrile. 21 (75%) children with a known seizure disorder received antibiotics, of which 10 were afebrile. 32 (44%) children received aciclovir, 14 of which were afebrile, and 5/14 had a known seizure disorder. 1 child had positive CSF microbiology.

#### Aciclovir use in children presenting with CSE



### CT head

**62%** of all patients had CT head

**50%** of patients with known seizure disorder had CT head

**0**

abnormalities detected

## CONCLUSION

Patient safety is paramount when delivering care. Antimicrobial stewardship and ionising radiation regulations are important aspects of patient safety. Afebrile children with known seizure disorders presenting with CSE should require high index of suspicion to receive antimicrobial treatment. Carefully considering the indication for CT head in all children presenting with CSE could reduce radiation exposure.

## References

1. Trinka, E., et al (2015), A definition and classification of status epilepticus – Report of the ILAE Task Force on Classification of Status Epilepticus. *Epilepsia*, 56: 1515-1523. <https://doi.org/10.1111/epi.13121>
2. WATCH. 2020. WATCH – Management of children in status epilepticus in the district general hospital. <https://www.watch.nhs.uk/wp-content/uploads/2021/01/Management-of-Status-Epilepticus-in-the-DGH.pdf>