Pyridoxine in Management of Super-Refractory Status Epilepticus: A Case Report

INTRODUCTION

- Super-refractory status epilepticus (SRSE) is status epilepticus that has recurred within or persisted for more than 24 hours after initiation of intravenous anaesthetic medication. It carries a high risk of morbidity and mortality.
- **Typically, pyridoxine responsive or** dependent seizures are considered in neonates with persistent seizures but have very rarely been reported in older children and even adults.
- □ We report a case of super-refractory status epilepticus (SRSE) that stopped only after the use of pyridoxine.

AIM



Raise awareness on super-refractory status epilepticus and propose the addition of pyridoxine to all status epilepticus management guidelines.

She walked at 2 years and had aphasia.

weight at 5th centile of CDC chart.

INVESTIGATIONS:

- Sepsis screen including CSF culture, malaria parasite tests, serum electrolytes, blood sugar, magnesium and liver function tests were normal
- no acute changes.

TREATMENT:

- Intravenous phenytoin, phenobarbitone, oral levetiracetam and clonazepam added in succession with no response.
- Empirical antibiotics and antimalarial received.
- Continuous thiopental sodium infusion incrementally for over 72hrs without resolution.
- Seizures stopped within 24 hours of oral pyridoxine 100mg.
- She had feeding difficulty and lost all motor milestones requiring weeks of rehabilitation.

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CASE

- VE, a 9-year-old girl was referred to our facility with low grade fever and 2 episodes of non-projectile vomiting the previous day and continuous convulsions of 9 hours prior to presentation. There was a
- history of a single afebrile seizure two years earlier.
- She had neonatal jaundice and required exchange blood transfusion.
- **EXAMINATION**: She had ongoing clonic seizure, microcephaly, and

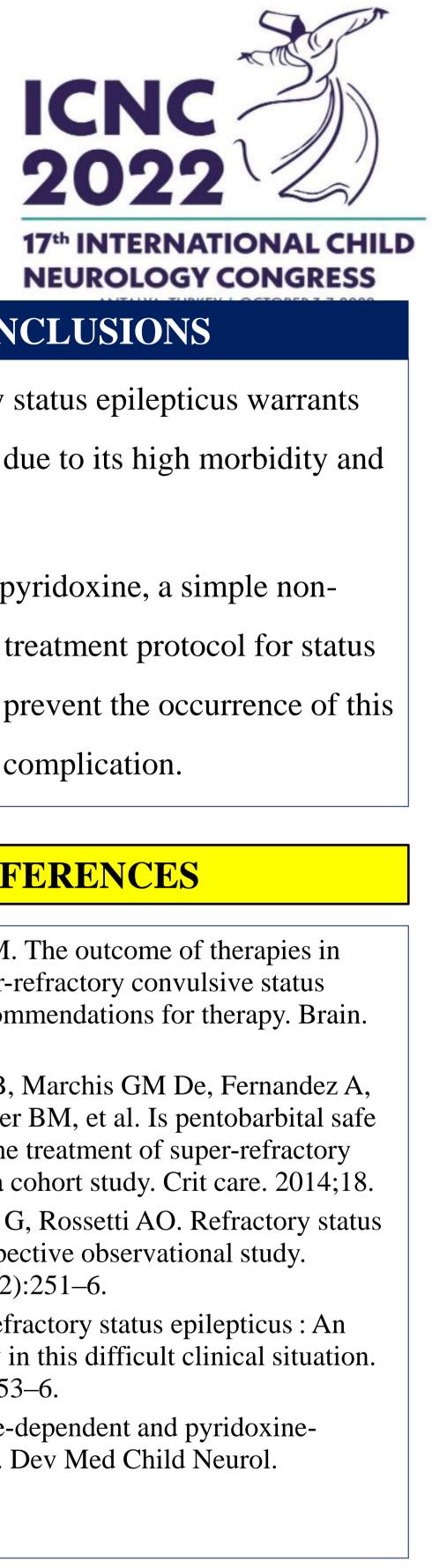
Brain MRI revealed cerebral atrophy and encephalomalacia with

DISCUSSION

- □ SRSE complicates 10-15 % of SE often with high morbidity and mortality.
- □ It is encountered in patients with severe acute brain injury or those with idiopathic status epilepticus (no previous epilepsy).
- Pyridoxine dependent epilepsy (PDE) typically presents in the first year of life with drug resistant epilepsy hence its inclusion in SE algorithms in children <2 years of age.
- □ It is unclear whether the child had a late presentation of genetic PDE or a symptomatic deficiency state as investigations were limited.
- Severe malnutrition which could lead to symptomatic deficiency was not present in VE.
- □ A few adult literatures have reported seizures due to pyridoxine deficiency states all with identifiable triggers such as drugs (anti-tuberculosis), uremia or cirrhosis.
- Due to unavailability of parenteral formulation, oral pyridoxine was used with the same desired outcome.



- for ALDH7 were not done.
- a single case report.



CONCLUSIONS

Serum pyridoxine level and genetic testing

- Super-refractory status epilepticus warrants meticulous care due to its high morbidity and mortality.
- The addition of pyridoxine, a simple nontoxic vitamin in treatment protocol for status epilepticus may prevent the occurrence of this potentially fatal complication.

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