

Through the unknown, find the new!

-a retrospective study on Febrile Infection-Related Epilepsy Syndrome (FIRES)

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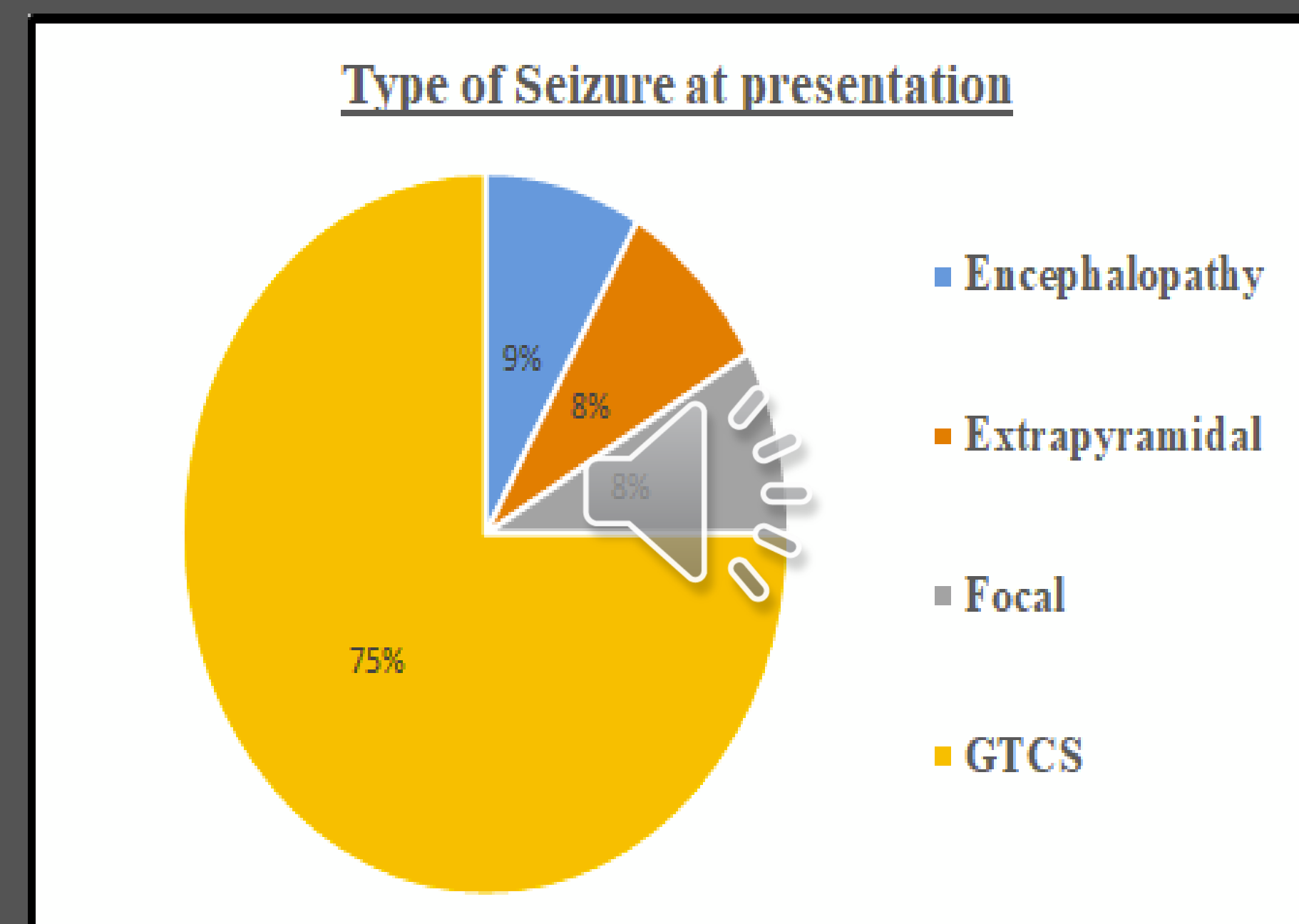
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Objective: To summarize the clinical features and outcomes in children with FIRES and review on current evidence.

Methods: Retrospective cohort on children 1-16 years with a diagnosis of FIRES in a district hospital in south India over 1 year and literature review following consensus on FIRES in 2022.

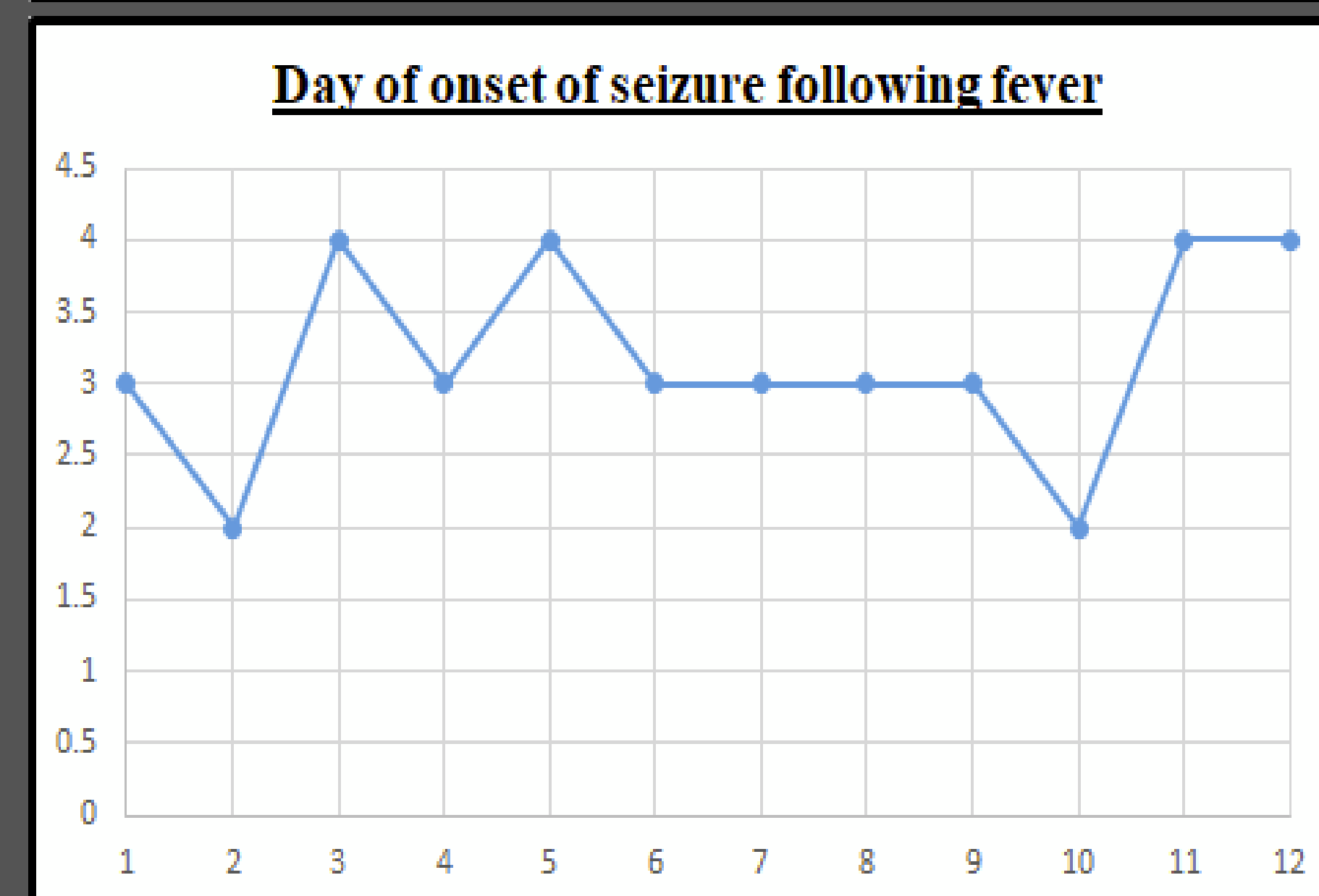
What is already known?:

- FIRES is a catastrophic epileptic syndrome affecting previously healthy children of 3-15 years (1).
- The incidence is reported to be 1: 1,000,000 with male preponderance (2).
- Focal followed by GTCS has been mentioned as the common presentation by (3)
- The outcome varies but is usually poor, with up to 30% mortality with early management playing a key role. Ketogenic diet, Anakinra, Cannabidiol and Tocilizumab have been tried (1,3).



What this study adds:

- We had 12 children who were previously healthy from 3 to 7 years of age (70% male) in 1 year period in south India with 25% mortality in acute phase and severe disability in remaining children.
- 83% of our cohort presented with GTCS during the acute phase. MRI was normal. CSF (including NMDA screen) was negative. EEG was abnormal in 91% but no definite pattern could be ascertained.
- Benzodiazepines and intravenous methyl prednisolone were used in all children. Ketogenic diet and immunomodulation were not tried due to limited resources.



Further discussion:

- Whether higher prevalence of infections in the population related to higher incidence in the cohort?
- Is there a structured investigation to explore in resource limited setting?
- Will genetic tests help in the future?

Conclusion: FIRES is a diagnostic dilemma in spite of epileptic advances. Early clinical diagnosis with a structured approach to investigations might help in reducing mortality. A multicentric approach in the population might open a new horizon.