

Effectiveness of Intravenous Immunoglobulin Therapy for Pediatric Viral Encephalitis. Ann Child Neurol 2020.

• Retrospective study conducted between January 2012-December 2019.

• 35 pediatric patients with confirmed or suspected viral encephalitis.

• 20 patients treated with IVIg AND conventional therapy (IVIg-treated group), and 15 patients treated with conventional therapy (non-IVIg-treated group).

• Clinical features and outcomes compared



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Pediatric Evidence And Research Learning Snippet



Viral Encephalitis and IVIG Therapy

IVIg-treated group vs. non-IVIg treated group

Clinical features:

- IVIg-treated group had more critical clinical features at admission
 - Lower pediatric GCS (9.1 ± 2.3 vs. 10.8 ± 2.7 , $P=0.02$)
 - Longer fever duration (3.5 ± 2.2 d vs. 1.8 ± 1.1 d, $P=0.02$)
 - More MRI abnormalities ($n=14$, 73.7% vs. $n=3$, 20%, $P=0.002$)
 - Higher occurrence of seizures and CSF pleocytosis

Clinical outcomes: No difference in

- Mortality (one death in IVIg vs none in non-IVIg, $P=1.000$)
- Neurological deficits at discharge ($n=2$, 10% vs. $n=1$, 6.7%, $P=1.0$)
- Occurrence of epilepsy after discharge ($n=5$, 25% vs. $n=2$, 13.3%, $P=0.6$)
- Time from admission to recovery of consciousness (2.8 ± 3.2 d vs. 3 ± 4.9 d)
- Disappearance of fever (1.6 ± 2 d vs. 1.5 ± 3.1 d)
- Complete recovery ($n=14$, 70% vs $n=13$, 86.7%)

Conclusion:

IVIg may be considered as a potential immunomodulating agent when treating critical pediatric viral encephalitis to improve neuropsychological outcomes.

Key Message:

In this retrospective observational study, the IVIg-treated group had a more critical clinical condition at admission than the non-IVIg-treated group, and hence were chosen to give IVIg treatment. Clinical outcomes of both groups were comparable.

EXPERT COMMENT



Literature suggests that there is some evidence for the beneficial 'adjunctive' role of IVIg in children with infectious encephalitis. Studies need to define the cases, include all etiologies and define core outcomes. The first, multicentric RCT across UK is underway to evaluate the effect of early IVIG in all forms of encephalitis in children.

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Reference

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