

Neonatal Rota Virus Leukoencephalopathy: Pattern Recognition Aids Diagnosis!

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Int J Ep

A 30-week preterm neonate with an uneventful transition was referred on day 13 of life with refractory seizures and encephalopathy. There was no history of systemic symptoms. Septic workup and cerebrospinal fluid (CSF) study were unremarkable. Electroencephalogram (EEG) showed a

burst attenuation pattern (►**Fig. 1**). Magnetic resonance imaging (MRI) of the brain showed extensive areas of symmetric diffusion restriction in deep white matter (►**Fig. 2**).

Based on the timing of seizure onset and the normal CSF profile, the possibility of central nervous system (CNS)

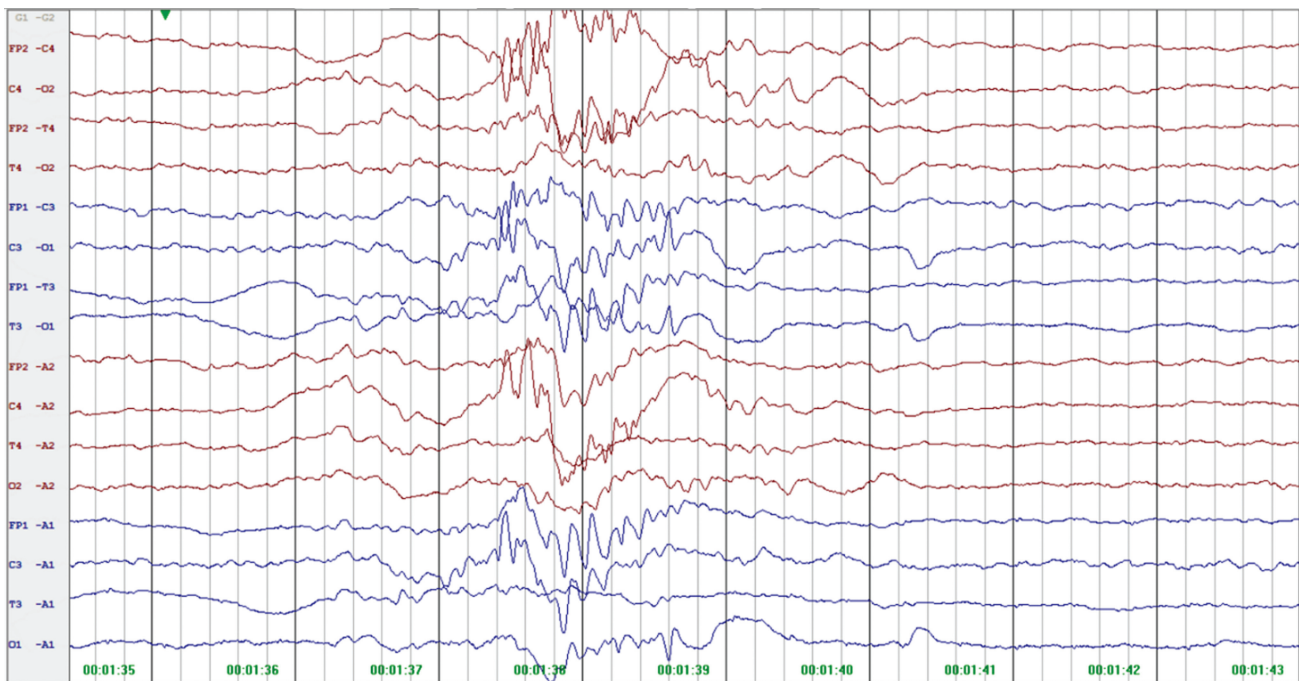


Fig. 1 Electroencephalogram (EEG) showing a burst attenuation pattern.

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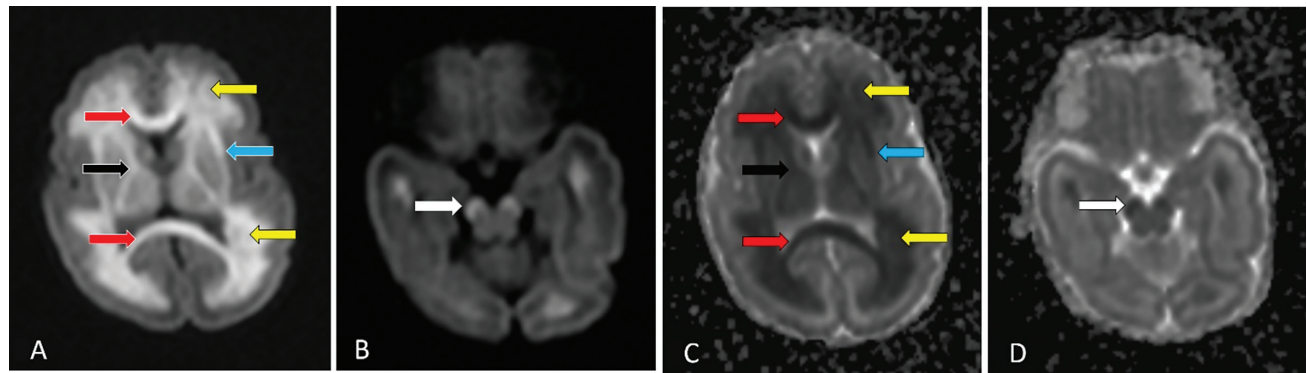


Fig. 2 Diffusion weighted imaging (DWI) showing (A) diffuse, symmetric, bilateral hyperintensities involving frontal and temporal white matter (yellow arrows), internal capsule (black arrow), external capsule (blue arrow), corpus callosum (red arrow) and (B) crux cerebri (white arrow), which show restriction as seen in the (C, D) corresponding images on the addition diffusion coefficient (ADC).

infection (viral)/inborn error of metabolism was considered. A distinctive pattern of MRI findings is commonly reported in viral infections during the neonatal period, especially with CNS rotavirus infection.¹ Stool polymerase chain reaction (PCR) for rotavirus was sent; it was positive. Similar MRI findings have also been described in other viral encephalitis (e.g., enterovirus, parechovirus) in the neonatal age group.¹

He was managed symptomatically with antiseizure medication and supportive therapy. He was seizure free by 48 hours of admission. Repeat EEG showed continuous electrocerebral activity with occasional periods of burst attenuation pattern.

Rotavirus is a common etiology for acute gastroenteritis in infants worldwide. Neonatal rotavirus infection can cause diverse CNS manifestations such as benign convulsions with gastroenteritis, aseptic meningitis, encephalitis, and cerebellitis.² A unique pattern of white matter injury has been

reported in neonatal rotavirus infection.³ A clinico-radiological pattern recognition and stool examination help establish the diagnosis and plan management.

Conflict of Interest

None declared.

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