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Herpes Simplex Virus Meningoencephalitis: Is It Nice to Continue

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Dear Editor,

Herpes simplex is one of the most common causes of viral encephalitis in infants and children[1]. The presentation of herpes simplex encephalitis (HSE) in children can be insidious and non-specific[1, 2]. In infant and young children, NICE guideline recommended symptoms and signs suggestive of HSE[3]. Early recognition of HSE is essential, to avoid the potentially devastating outcomes[4]. Therefore, we set out to discuss the clinical presentation, as well as electroencephalogram (EEG) and neuroimaging findings of the HSE cases admitted to our Paediatric wards over a ten year period from Jan 2008 to Jan 2018. Four cases were identified based on PCR confirmation of HSV 1 or 2 in cerebrospinal fluid samples.

Focal seizures with or without fever on presentation were documented in two patients, of whom a 19-month-old presented with prolonged, more than 30 minutes, focal febrile seizure. A preceding history of pyrexia, lethargy and cough for few days was noted. EEG showed excess slowing over both posterior regions, left more than right, consistent with bilateral cerebral dysfunction without epileptiform discharges. MRI brain demonstrated deep white matter changes in the left parietal and posterior parietal/occipital regions and adjacent grey matter. There was further high signal change adjacent to lateral ventricles with two small punctate haemorrhages in the left mid-parietal region. A further infant aged 3-week-old, presented with recurrent focal seizures, with increasing frequency over two days. However no fever was documented on presentation. EEG recorded two seizures with origin near the right midline with spread to right motor cortex and right hemisphere. MRI brain showed right deep white matter changes and left subcortical lesion.

Moreover two patients experienced febrile generalised seizures. Notably, six episodes of febrile generalised tonic seizures over 48 hours, each less than 5 minutes in duration, have been reported in an 11-week-old female infant. The patient was irritable between the episodes. EEG demonstrated some asymmetry and excess slow activities over right temporal region in sleep, with no epileptiform features. However, no abnormality was present on MRI brain. A further 13-month-old female presented with febrile status epilepticus on a preceding history of pyrexia and diarrhoea for 3 days. EEG showed three epileptic spasms with background continuous epileptiform discharges, which are multifocal; predominantly right posterior in sleep and some frontal discharges in sleep were observed. MRI brain showed subtle high signal white matter changes in the frontal lobes bilaterally and multiple high signal areas throughout corpus callosum.

This case series demonstrated that HSV can present with atypical febrile seizures, especially, those that are prolonged or focal or that recur during the same illness. Moreover, this series highlighted that HSE should be considered in infants younger than one month, with worsening focal seizure; even in the absence of fever on presentation. In conclusion, using the available guidelines to recognise HSE in a timely fashion is essential to minimise patient morbidity and mortality.

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