Triphasic Waves in EEG, an Atypical Finding in a Subacute Sclerosing Panencephalitis (SSPE) Adult Patient

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Abstract

Subacute sclerosing panencephalitis (SSPE) is a known rare cause of progressive myoclonic encephalitis of childhood and young adults due to a persistent measles virus infection. It is usually characterised by myoclonic jerks, cognitive decline, typical EEG findings that clinches its diagnosis and further supported by a high CSF and serum measles antibody titre.

Keywords: Triphasic Waves; EEG; SSPE

Introduction

SSPE is an inflammatory condition of the brain due to a persistent mutant measles virus infection [1]. It affects 5-15 years of age but the oldest reported is 49 [2]. Patients with SSPE are usually infected with measles virus in the early age [3]. It is a fulminant condition leading to death within 5 years but short survival of few months is seen in 10 % [4]. Myoclonus, seizure, cognitive decline, behavioural problem, pyramidal and extrapyramidal features are common clinical signs reported [5-7]. The diagnosis of SSPE is made when three out of five criteria given by Dyken are fulfilled which involved clinical, EEG, CSF analysis, anti-measles titre and brain biopsy [8-10]. Periodic repetitive complexes at a regular interval are characteristic but many variants are reported. We hereby report a case of adult onset SSPE with atypical EEG findings of triphasic waves.

Case Report

We report a 20 year old girl admitted with cognitive decline and abnormal body movement for more than 16 month now bed ridden for last 3 month. On admission patient was conscious following command moving all four limbs. Myoclonic jerk involving limbs at a regular interval were noted. General physical examination was unremarkable. Detailed ophthalmological examination showed a normal fundus with no changes in the retina and optic nerve head. The kidney routine blood test, anti thyroperoxidase antibody, serum ammonia was normal. Viral markers were negative.

Figure 1: Axial FLAIR images shows bilateral asymmetrical high signal intensity in sub-cortical and deep white matter involving parietal occipital lobes with basal ganglia involvement
Triphasic waves although rare can be seen in end stage of SSPE. Triphasic waves are rarely reported in SSPE but definitely mention in a few studies [14]. Hypoxic or unknown metabolic pathology could be the reason for these waves and usually seen in the end stage of the illness where anoxic brain injury may set in.

Conclusion

Triphasic waves although rare can be seen in end stage of SSPE.

References

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