

MOG ANTIBODY-ASSOCIATED ENCEPHALITIS SECONDER TO COVID-19

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INTRODUCTION

The novel severe acute respiratory syndrome corona virus 2 (SARS-COV-2) is initially being described as a respiratory system also affect the other system and organs especially with a severe multi system inflammatory syndrome in children (MIS-C). Neurological complications varying from headache, dizziness, impaired consciousness to encephalitis, meningoencephalitis, stroke, seizures, myelitis and also inflammation on peripheral nervous system such as Guillen Barre Syndrome (GBS) and Miller Fischer Syndrome (MFS).

CASE

A previously healthy 9 years old male child applied to our emergency service with tonic-clonic seizures and impaired conscious. After intravenously administration of Midazolam and Levetirasetam the status resolved but he had tonic eyes deviation, involuntary arms and legs spasm and meaningless speech. CSF analysis suggested encephalitis. Serum MOG antibody titre of 1:100. His COVID-19 antibody test detected >250 U/ml (N<0.8).The initial electroencephalograph had very slow waves (delta and theta) and inadequate development for age and had no variation. After no response to pulse methyl prednisolone for 5 days and IVIG (2 g/kg) therapy, plasma exchange was made . And he was get better after that therapy. The IVIG therapy every month during six months continued. The serum MOG antibody was positive (titre of 1:100) at the end of six months, so the immunosuppressive therapy was extended during the follow-up period.

CONCLUSION

This case showed possible association between inflammation due to COVID19 and autoimmunity due to MOG antibody. Our case shows that autoimmune encephalitis after or concomitant with COVID-19.

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