COVID-19 related encephalitis in pediatric patient: a case report

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Argomento: COVID-19

Sars-Cov-2 infection in pediatric patients proceeds asymptomatically or causes mild symptoms in most cases. Rarely manifestations of systemic inflammatory pathologies may occur, including neurological involvement. The modalities of presentation and course of these forms are still little known, as well as the diagnostic peculiarities and the outcomes. We present the case of a patient who presented neurological manifestations as expression of COVID-19.

Case report

A 4-year-old male child presented to the ED for generalized seizures; he was positive for Sars-Cov-2 swab but fully asymptomatic. In the previous hours he presented headache and vomiting followed by generalized tonic-clonic crisis. The patient was intubated to safely reach ED. MRI study with T1, T2 and diffusion weighted sequences resulted negative. Extensive screening had rule out other possible cause of the neurological deterioration, so a diagnosis of COVID-19 related encephalitis was made. Under EEG monitoring, the child was treated with levetiracetam. He rapidly improved and was extubated after 2 days. The child showed cerebellar signs in the following 3 days, regressed completely in the following days. No other manifestations of COVID-19 were detected during hospitalization.

Discussion

Our case shows that COVID-19 can occur in pediatric age with an exclusively neurological picture such as viral encephalitis. Similar forms have already been described in adult patients (1). The pathology can present itself in a severe form with multiple neurological manifestations; CT and MRI may show no alteration, without thereby excluding the diagnosis (2). The course tends to be benign with full return to normal, but cases with a slow course with residual sequelae have been reported (3).

Conclusions

Even in pediatric age, Sars-Cov-2 infection can have an exclusively neurological expression, as in viral encephalitis; the normality of the CT and MRI findings does not exclude the diagnosis. The course is usually benign with spontaneous resolution.