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Letter to the Editor

Authors' response to Dr Finsterer's comment "Exclude differentials before diagnosing SARS-CoV-2-associated acute hemorrhagic necrotizing encephalitis"
(THEIJID-D-22-00008)



Sir,

We thank Dr Finsterer for his interest in our publication.

Considering his remark that we did not consider the acute necrotizing encephalopathy (ANE) case by Lazarte-Rantes, we did cite it (Lazarte-Rantes C. 2021). We discussed the inconsistencies in the literature regarding the diagnosis of acute necrotizing hemorrhagic encephalitis (AHNE) and ANE. The cases seem different because our patient was SARS-CoV-2 polymerase chain reaction (PCR)-positive, whereas Lazarte-Rantes's case was PCR-negative. The association with SARS-CoV-2 was only based on positive IgG; IgM was negative. This suggests a past SARS-CoV-2 infection in previous months. No genetic testing was done and ANE may result from genetic mutations. Therefore, SARS-CoV-2 might not have been the cause of ANE in their case, especially because seropositivity is common during the COVID-19 pandemic (Lazarte-Rantes C. 2021).

We regret that Dr Finsterer had the idea that we underestimated the burden of pediatric COVID-19. We wrote that it was commonly benign because many children are asymptomatic and usually do not require hospitalization. In a recent study, the average duration of symptoms (most commonly headaches and fatigues) was 6 days (Molteni E 2021). We emphasized that severe cases existed. We mentioned other severe neurologic manifestations; however, we did not discuss all the COVID-19 complications, as it was not the topic of our article.

Concerning diagnostics, the tests included HSV1, 2, HHV6, VZV, EBV, CMV, adenovirus, coronavirus 229E, HKU1, NL63, OC43, MERS-CoV, human metapneumovirus, human rhino/enterovirus, Influenza A, A/H1, A/H1-2009, A/H3, B, Parainfluenza 1, 2, 3, 4, RSV, Bordetella parapertussis, Chlamydia, Mycoplasma pneumoniae, and bacteria. We did not include tuberculosis (TB) in differentials, as it is extremely rare in our country in patients at this age. There were 39 cases of TB in patients aged <14 years in Poland in 2020; of those, 2 were cases of extrapulmonary TB, with no cases of meningitis (Korzeniewska-Kosela M. 2021). BCG vaccination of all neonates is mandatory in Poland. The only source of the infantile TB infection could be the parents, and they are healthy with no cases of TB in their family. They had limited contact with other people because of the pandemic.

We agree that repeating a lumbar puncture would have been indicated. The fulminant progression to massive brain edema made it impossible. We performed all the most important diagnostic tests available. We could not confirm the SARS-CoV-2 in the cerebrospinal fluid (CSF). As we did not have a validated method to de-

tect SARS-CoV-2 in the CSF, we used the standard PCR method for nasopharyngeal swabs. Possibly, its sensitivity was too low. Lewis et al. detected the viral presence of SARS-CoV-2 in CSF in 2 of 59 children and 17 of 303 of all COVID-19 patients with neurological manifestations (Lewis A 2021). Therefore, the absence of the virus in CSF does not exclude this etiology. We also agree that the autopsy would have been important. Unfortunately, we did not get consent for the procedure.

Declaration of Competing Interest

The authors declare no conflict of interest.

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Ethical Approval

This publication complies with ethical standards. Ethical approval was requested from the Medical University of Warsaw Ethical Committee; however, it was judged as not required.

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