Covid-19-vaccine-pfizer-biontech

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Multisystem inflammatory syndrome in children like symptoms: case report

A 12-year-old boy developed multisystem inflammatory syndrome in children (MIS-C) like symptoms following COVID-19-Vaccine-Pfizer-BioNTech to prevent COVID-19 infection.

The boy, who had acute encephalopathy, headache, vomiting, diarrhoea and elevated troponin, presented to the hospital. Two days prior to admission, he had received a second dose of COVID-19-Vaccine-Pfizer-BioNTech [Pfizer-BioNTech COVID-19 vaccine; *route and dosage not stated*]. He had received first dose of COVID-19-Vaccine-Pfizer-BioNTech twenty four days prior to admission. After 5 days from the first dose of vaccine (nineteen days before the presentation), he developed a lesion consistent with erythema migrans (EM), indicating Lyme disease. He lives in an endemic area for Lyme disease. He had completed an amoxicillin treatment for Lyme disease. After receiving the second dose of COVID-19-Vaccine-Pfizer-BioNTech, he developed severe headache on the night, and over the next 48 hours had persistent headache, emesis, visual hallucinations and worsening encephalopathy. Additionally, his troponin level was elevated, indicating cardiac involvement. Subsequently, he was admitted to the pediatric intensive care unit for close neurologic and cardiac monitoring. Subsequent laboratory examination showed elevated C-reactive protein (5.8 mg/dL), hyponatremia (125 mmol/L), elevated troponin T (0.22 ng/mL), neutrophilia (9840 cells/uL) and lymphopenia (1080 cells/uL). At the time of admission, the Lyme antibody titers were negative. It was concluded that, the Lyme disease an unlikely explanation for his presentation to hospital. His immunologic markers of acute or recent infection was negative. On hospital day 2, the BNP level elevated to 190 pg/mL. Cerebrospinal fluid (CSF) analysis did not suggest encephalitis. A brain magnetic resonance imaging (MRI) showed a cytotoxic splenial lesion of the corpus callosum (CLOCC). EEG showed intermittent right posterior slowing without epileptiform activity to suggest an underlying diagnosis of epilepsy. Due to normal cardiac MRI and improving cardiac and inflammatory biomarkers, he did not receive immunomodulatory therapies. On hospital day 5, he was discharged from the hospital. After 3 weeks from discharge, he was asymptomatic with normal neurological exam. Whole-genome sequencing did not identify any coding variants indicative of an underlying immune disorder. Based on the investigations, it was concluded that, he had developed MIS-C like symptoms secondary to COVID-19-Vaccine-Pfizer-BioNTech [*duration of treatment to reaction onset not stated*].

Poussaint TY, et al. Multisystem Inflammatory-like Syndrome in a Child Following COVID-19 mRNA Vaccination. Vaccines 10: 43, No. 1, Jan 2022. Available from: URL: https://www.mdpi.com/2076-393X/10/1/43/pdf