Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Opsoclonus After COVID-19 in an Infant

Burr et al. report a toddler with autoimmune encephalitis following a COVID-19 infection.[1] We describe a child with another immune-mediated disorder in an infant after a SARS-CoV-2 infection.

This four-month-old female twin was admitted after developing episodic chaotic eye movement and tongue thrusting. Her symptoms began one month after a COVID-19 infection with brief, unheralded conjugate eye movements in all directions. She experienced up to eight episodes per day, the longest of which lasted seven minutes. The mother provided smartphone videos of two episodes and consented to share these images (Video). She tried to halt or reduce the episodes by placing her hand over the eyes. Her development had been normal with no evidecne of regression.

Twin girls were born by Caesarean section at 36 weeks' gestation after normal prenatal care including a normal twentieth-week ultrasound. At age five weeks she was treated for cough and dyspnea and released from the emergency department, but screening nasal swabs for COVID-19 in both the twins and their mother were positive. The patient's respiratory symptoms cleared in less than a week, but then the mother observed "eye vibrations."

During her hospital admission, she was afebrile and interactive between episodes. Cranial nerves were intact. She had normal to mildly increased muscle tone, normal strength, reflexes, and coordination. Aside from the eye movements, her neurological and eye examinations were normal, with steady fixation, reactive pupils, moderate hyperopic astigmatism, and normal retinae without papilledema or optic nerve pallor.

A prolonged video electroencephalography demonstrated no epileptiform discharges and captured an eight-minute episode of abnormal eye movement that was not epileptic in nature. Magnetic resonance imaging of the head and spine with and without contrast and computed tomography of chest, abdomen, and pelvis were negative. Cerebrospinal fluid tests for protein, glucose, and oligoclonal bands were negative. Complete blood count, magnesium, phosphorus, C-reactive protein, carnitine, plasma amino acids, and paraneoplastic antibody panel were normal. Urine for homovanillic acid and vanillylmandelic acid were normal. Urine organic acids were normal and autoimmune encephalitis panel, anti-HU (Human neuron-specific RNA-binding protein HuD), and anti-N-methyl-D-aspartate receptor antibody were all negative. The repeat COVID-19 swab was negative, but her COVID-19 IgG/IgM antibody test was positive.

She was treated with intravenous immunoglobulin and corticosteroids with prompt elimination of the eye movements, then discharged on oral corticosteroids.

Opsoclonus or saccadomania is a chaotic eye movement disorder often associated with myoclonus. Etiologies include toxins, paraneoplastic syndromes, and postinfectious disorders.[2] The infant described here corroborates two earlier reports documenting opsoconus following a COVID-19 infection in older patients.[3,4]

Supplementary data

The video asscociated with this article can be found online at https://doi.org/10.1016/j.pediatrneurol.2020.12.009.

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For completeness: Dr. Arnold is President of Glacier Medical Software that makes cloud-based NICU monitoring ROP-Check and also President of PDI Check that makes a patent-pending vision screening game for the autostereoscopic Nintendo 3DS console. Dr. Arnold coordinates the Alaska Blind Child Discovery, which has received discounted vision screening technology from several vendors. Dr. Arnold is an investigator and protocol developer for the NIH-funded Pediatric Eye Disease Investigator Group.

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