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.

Pediatric Neurology 116 (2021) 59

Contents lists available at ScienceDirect

Pediatric Neurology

journal homepage: www.elsevier.com/locate/pnu

Correspondence

Neurological Manifestations of COVID-19 in Children: A Case of Facial Nerve Palsy

Kaur and colleagues[1] presented a child with an unusual neurological presentation (longitudinally extensive transverse myelitis) following SARS-CoV-2 infection. Unlike acute presentations due to direct SARS-CoV-2 invasion of the central nervous system (i.e. encephalitis[2]), immune-mediated neurological symptoms may occur when the patient has already cleared the virus and has developed antibodies against it.

Facial nerve palsy has been reported as a possible complication of COVID-19.[3] Its incidence increased during the pandemia both in adult[4] and pediatric[5] emergency departments; in affected patients, nasopharyngeal swabs tested negative for SARS-CoV-2, but serology has not been obtained.

We describe a 15-month-old girl with right peripheral facial nerve palsy without any other neurological signs. Serological tests for common infectious etiologies (herpes simplex virus 1, herpes simplex virus 2, varicella zoster virus, Epstein-Barr virus, cytomegalovirus, *Mycoplasma pneumoniae*, *Borrelia burgdorferi*) were negative. Magnetic resonance imaging showed enhancement of the intra-auricular tract of the right facial nerve.

Nasopharyngeal polymerase chain reaction for SARS-CoV-2 was negative, but serological testing revealed positive IgG antibodies. Remarkably, the patient and her family had earlier experienced mild respiratory symptoms, fever, anosmia, and ageusia, all of which recovered spontaneously. Our patient underwent a course of prednisone (1 mg\kg\day for six days followed by tapering) and subsequently achieved clinical resolution.

Along with other well-established infections that trigger facial nerve palsy, we propose to carry out both SARS-CoV-2 swab and serology testing because facila palsy could represent an immune-mediated neurological complication of COVID-19, similar to transverse myelitis and Guillain-Barrè syndrome.

References

1. Kaur H, Mason JA, Bajracharya M, et al. Transverse myelitis in a child with COVID-19. Pediatr Neurol. 2020;112:5–6.
2. McAbee GN, Brosgol Y, Pavlakis S, Agha R, Gaffoor M. Encephalitis associated with COVID-19 infection in an 11-year-old child. Pediatr Neurol. 2020;109:94.
3. Cagnazzo F, Arquizan C, Derraz I, et al. Neurological manifestations of patients infected with the SARS-CoV-2: a systematic review of the literature. J Neurol. 2020:1–10.
4. Zammit M, Markey A, Webb C. A rise in facial nerve palsies during the coronavirus disease 2019 pandemic. J Laryngol Otol. 2020:1–4.
5. Brisca G, Garbarino F, Carta S, et al. Increased childhood peripheral facial palsy in the emergency department during COVID-19 pandemic. Pediatr Emerg Care. 2020;36:e595–e596.

Alice Decio, MD
Child Neurology and Psychiatry Unit, Papa Giovanni XXIII Hospital, Bergamo, Italy
E-mail address: alice313@gmail.com.

Angelo Mazza, MD, Vera Quadri, MD, Monica Silvia Ronconi, MD, Claudia Brusadelli, MD, Maurizio Ruggeri, MD, Lorenzo D'Antiga, MD
Department of Pediatrics, Papa Giovanni XXIII Hospital, Bergamo, Italy

Available online 17 December 2020

https://doi.org/10.1016/j.pediatrneurol.2020.12.006