

COVID-19 Associated Facial Palsy, A Clinical Dilemma

Sir,

Coronavirus-2019 (COVID-19) is found to present with a myriad of symptoms, ranging from a simple flu-like illness to complex neurological manifestations, and continues to baffle us with its presentations. We intend to highlight an important presentation of COVID-19 infection.

A 43-year-old man presented with sudden onset right-sided facial weakness, following testing positive for SARS-CoV-2, where full diagnostic workup excluded other causes.

This gentleman presented having woken up with sudden onset right-sided facial weakness. He tested positive for COVID-19 3 weeks prior and again on admission. Past medical history included insulin-dependent type 2 diabetes and hypertension, which were well controlled. Examination revealed Grade III right-sided lower motor neuron facial nerve palsy on the House–Brackmann grading system. There was no other neurological deficit. Ear, nose, and throat examination was normal.

Admission blood tests revealed mildly elevated C-reactive protein (8 mg/dl) and a nonfasted plasma glucose of 7.9 mmol/L. Both computer tomography and magnetic resonance imaging of the head were normal. Lumbar puncture showed normal cell count and ruled out bacterial infection on culture and viral infection on polymerase chain reaction assay. Stapedial reflex showed an elevated threshold on the right side, while pure tone audiometry was within the normal range.

Benefits of commencing steroids for facial palsy were considered, weighed against detrimental effects on blood sugars, and unproven benefit in COVID-19 infection.

He was treated with 50 mg prednisolone daily with careful monitoring of blood glucose levels for 10 days, and eye lubricants. Upon follow-up, there was a great improvement in facial palsy to Grade II on the House–Brackman scale.

COVID-19 continues to surprise and challenge with new presentations. One such symptom is possibly that of unilateral facial paralysis as shown by our case.

Various central and peripheral nervous system manifestations of COVID-19 have been reported,^[1,2] although not including facial palsy, and are sometimes the only presenting symptom. This is of immense value as we must have a high index of suspicion to manage the case appropriately and prevent further spread of infection.

It remains unclear whether COVID-19 is neurotropic,^[2] yet it has been linked to various nervous system manifestations. Aberrant immune response to COVID-19 may be responsible

for polyneuritis cranialis^[3] which could explain the involvement of cranial nerves in COVID-19 despite being not found in cerebrospinal fluid.

A possible association between isolated cranial neuropathies and COVID-19 has been suggested in several case reports, which need further analysis to support causality.^[4] Prakash and Raymond inferred that diabetes and hypertension do not influence the outcome of Bell's palsy.^[5]

Our case has considerable partial recovery and timely steroid intervention seems to have supported this.

Although diabetes is associated with facial palsy, in these times, we have to approach any case with COVID-19 with an open mind to the neurological manifestations the virus can cause.

We believe that facial palsy must be considered as one of the presentations of COVID-19 infection and keep your guard up with respect to the prevention of spread of the infection.

Thanking you,

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the legal guardian has given his consent for images and other clinical information to be reported in the journal. The guardian understands that names and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Shweta Pawar, Charlotte Juman, Nicholas Turner

Department of Otorhinolaryngology, Walsall Healthcare Manor Hospital NHS Trust, Walsall, United Kingdom

Address for correspondence: Dr. Shweta Pawar, Department of ENT, Walsall Manor Hospital, Moat Road, Walsall WS19PS, United Kingdom.
E-mail: shweta.pawar@nhs.net

REFERENCES

- Ahmad I, Rathore FA. Neurological manifestations and complications of COVID-19: A literature review. *J Clin Neurosci* 2020;77:8-12.
- Mao L, Jin H, Wang M, Hu Y, Chen S, He Q, *et al.* Neurologic manifestations of hospitalized patients with coronavirus disease 2019 in Wuhan, China. *JAMA Neurol* 2020;77:683-90.

3. Gutiérrez-Ortiz C, Méndez-Guerrero A, Rodrigo-Rey S, San Pedro-Murillo E, Bermejo-Guerrero L, Gordo-Mañas R, *et al.* Miller Fisher syndrome and polyneuritis cranialis in COVID-19. *Neurology* 2020;95:e601-5.
4. Goh Y, Beh DLL, Makmur A, Somani J, Chan ACY. Pearls and Oysters: Facial nerve palsy in COVID-19 infection. *Neurology* 2020;95:364-7.
5. Prakash KM, Raymond AA. The use of nerve conduction studies in determining the short-term outcome of Bell's palsy. *Med J Malaysia* 2003;58:69-78.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick Response Code: 	Website: www.jgid.org
	DOI: 10.4103/jgid.jgid_91_21

How to cite this article: Pawar S, Juman C, Turner N. COVID-19 associated facial palsy, a clinical dilemma. *J Global Infect Dis* 2021;13:198-9.

Received: 13 April 2021 **Accepted in Revised Form:** 22 April 2021

Published: 26 November 2021

© 2021 Journal of Global Infectious Diseases | Published by Wolters Kluwer - Medknow