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Letter to the Editor Regarding “Coronavirus Disease 2019 and Pituitary Apoplexy: A Single-Center Case Series and Review of the Literature”



LETTER:

Since the submission and acceptance of the review article titled “Coronavirus Disease 2019 and Pituitary Apoplexy: A Single-Center Case Series and Review of the Literature” by Martinez-Perez et al,¹ Mississippi has experienced an extraordinary surge of infections associated with the coronavirus disease 2019 (COVID-19) Delta variant. We write to report that 1 additional patient with COVID-19 has developed pituitary apoplexy at our institution.¹ In addition, 2 additional cases reporting

concomitant COVID-19 infection and pituitary apoplexy have been recounted since the publication date of our work.^{2,3} In this letter, we would like to provide the clinical details of 1 patient with pituitary apoplexy and concurrent COVID-19 infection that has been treated at our tertiary care center and discuss the importance of the recognition of this entity in this new pandemic era.

PATIENT 1

A 59-year-old woman with chronic kidney disease and sickle cell trait presented with abdominal pain, vomiting, fatigue, and malaise. On initial evaluation, she was found to have an acute kidney injury secondary to vomiting and decreased oral intake. Physical examination revealed no abnormalities aside from mild abdominal pain to palpation. The patient was also found to be positive for COVID-19 via polymerase chain reaction testing.

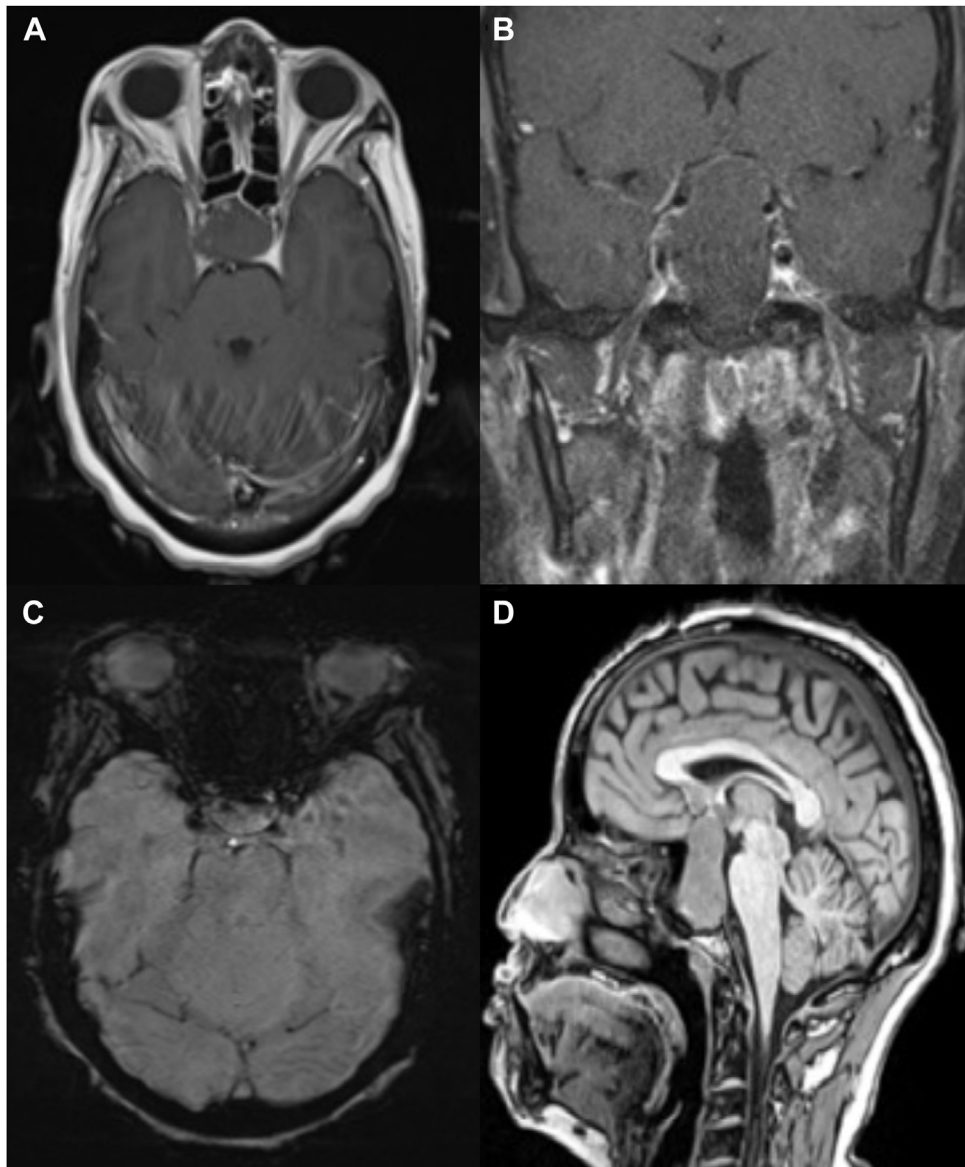


Figure 1. Imaging studies for patient 1. Preoperative axial (A) and coronal (B) T1-weighted contrast enhanced magnetic resonance imaging (MRI) demonstrating a 4.3-cm sellar mass with suprasellar extension compressing the optic chiasm. There is minimal enhancement along the superior aspect of

the mass. Preoperative axial (C) susceptibility weighted imaging and sagittal (D) T1 noncontrast enhanced MRI further display the superior extension of the sellar mass.

Precautions were taken, and the patient was isolated in accordance with our institutional protocol. The patient was admitted to our hospital for treatment of her kidney injury.

On hospital day 2, she began having decreased vision in her right eye and complained of a new-onset bitemporal headache. Ophthalmology was consulted, and she was started on stress dose steroids for suspected giant cell arteritis. By the following day, her vision had decreased to where she could no longer perceive light in her right eye. In addition, she began developing acute vision changes in her left eye. Further neurological examination at this time revealed a right cranial nerve six palsy. A magnetic resonance imaging (MRI) series of the pituitary was ordered, revealing a hemorrhagic 4.3-cm sellar mass with suprasellar extension that confirmed the diagnosis of pituitary apoplexy. Because of the acuity of her vision loss, the decision was made to undergo urgent surgical resection. The patient subsequently underwent transnasal transsphenoidal resection of her hemorrhagic pituitary mass without complication.

The patient recovered uneventfully from surgery, and at the end of her hospital stay, she had regained the ability to detect hand motion in the right eye and count fingers in the left eye. Her cranial nerve six palsy was no longer present. A steroid taper was initiated. At her 2-week follow-up, vision had improved in her right eye to the ability to count fingers. In addition, her visual acuity in the left eye was now 20/40. She continued to have residual nasal visual field deficits in her right eye. Pathologic examination revealed a hemorrhagic adenoma positive for luteinizing and growth hormone immunohistochemistry. The imaging studies are presented in [Figure 1](#).

CONCLUSION

With the addition of this case report, the total number of cases of pituitary apoplexy in patients with confirmed COVID-19 infection treated at our tertiary care center is 4. In addition, at the time of this writing, the total number of cases that have been reported in

the literature has risen to 13. Although our small sample size does not confer causality between COVID-19 and pituitary apoplexy, the additional surge in patients with these 2 concurrent conditions raises further concerns regarding a potential correlation. Further comparative studies with larger sample sizes may be needed to determine this. However, clinicians may choose to consider COVID-19 a risk factor for pituitary apoplexy and adjust the management of these patients accordingly. Meanwhile, we feel the necessity of reporting new cases presenting with this association, given the extraordinary surge of pituitary apoplexy cases at our institution associated with the COVID-19 Delta variant in the summer of 2021.

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