

# Acute Thalamic Stroke in a COVID Positive Adult: A Case Report

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## Case Diagnosis

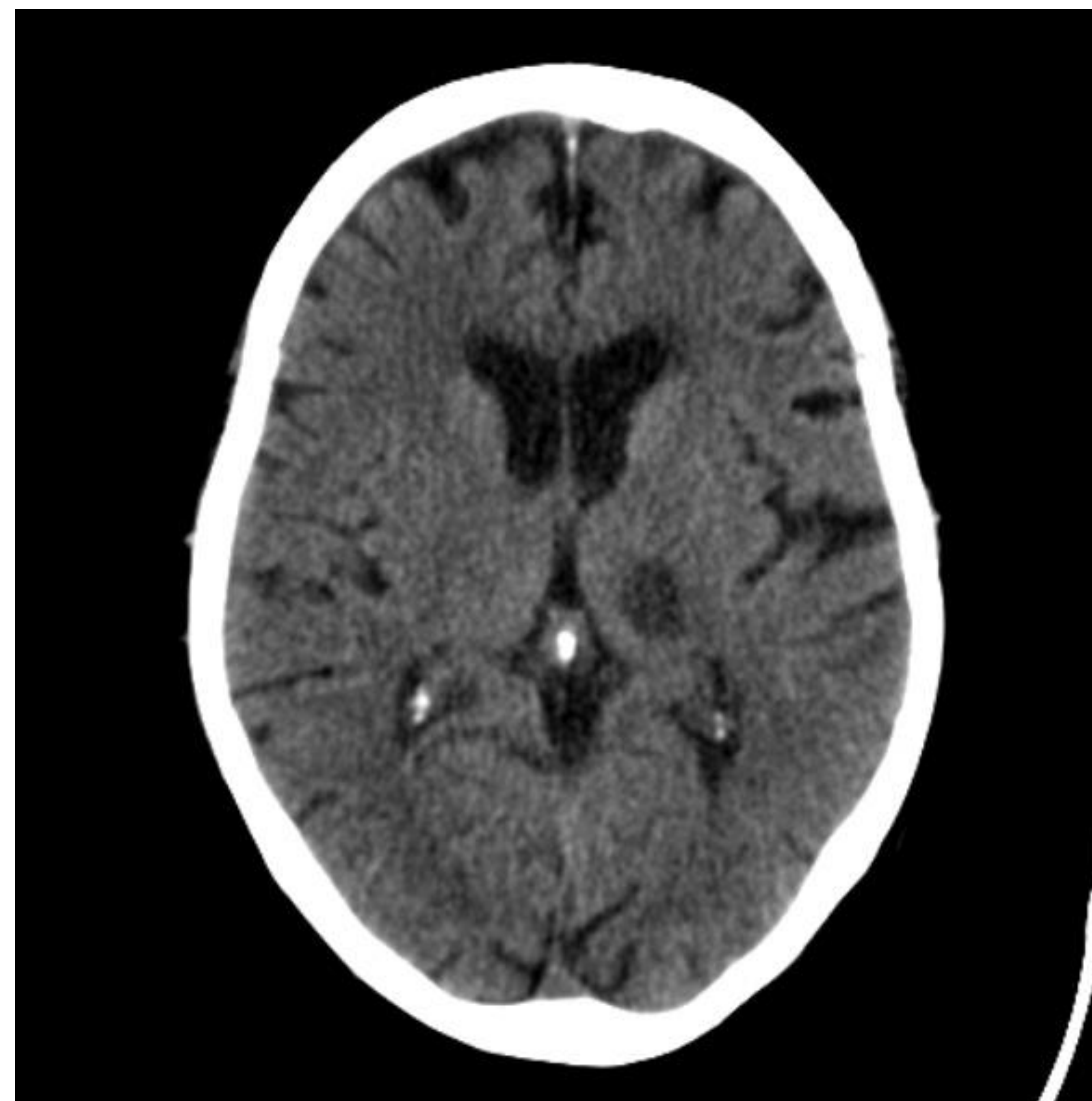
- This is a 39-year-old female with a past medical history of hypothyroidism, hyperlipidemia, and migraines presented for evaluation of paresthesia and right lower extremity hemiparesis and was subsequently diagnosed with a thalamic infarct in the setting of a recent symptomatic COVID-19 infection.

## Case Description

- The patient initially experienced tongue paresthesias, a bilateral anteromedial thigh rash, dizziness and nausea. She later developed upper respiratory symptoms including sore throat, cough, and shortness of breath.
- Home COVID-19 test was positive. The patient received a course of nirmatrelvir/ritonavir combination therapy with full resolution of respiratory symptoms, however, developed right sided weakness and upper and lower extremity paresthesia.
- Emergency Department (ED) workup included a CT Brain indicating no acute hemorrhage. However, MRI Brain revealed evidence of a left-sided acute thalamic infarct. Repeated COVID-19 testing remained positive.
- Upon transfer to inpatient rehabilitation, her clinical course was significant for continued hemiparesis, rash, and impaired ambulation secondary to continuous paresthesia.

## Rehabilitation Course

- On arrival, the patient was ambulatory with a hemi-walker, and required assistance for all transfers and ambulation with significantly noted fatiguability.
- Lower extremity strength was initially rated 3-/5. The patient benefited from physical rehabilitation focusing on strengthening the lower extremities.
- With continued right-sided hemiparesis, the patient was able to ambulate independently and without assistance on discharge.



**Figure 1.** Example CT Brain noncontrast axial section depicting an acute ischemic infarct of the left thalamus. Case courtesy of David Cuete. Radiopaedia.org. rID: 36507

## Discussion

- We report a case of a 39-year-old female with an unusual case of thalamic stroke in the setting of COVID-19. COVID-19 has been shown to cause hypercoagulability in affected individuals; however, studies concerning thalamic stroke in patients with COVID-19 are limited<sup>3,5,6,8</sup>.
- Our patient exhibited symptoms typical of thalamic stroke: right-sided hemiesthesia and lower extremity paresthesia<sup>1,4,7,8</sup>.

## Conclusion

- Of the many etiologies that may result in thalamic stroke, special consideration should be taken in symptomatic COVID-19 patients<sup>3,5,6,9</sup>. Knowledge concerning thalamic stroke secondary COVID is limited and requires further investigation and neurologic workup.

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