

Headache in COVID-19 : A viral prodrome or symptom of a more sinister neurological disease

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INTRODUCTION

- Cerebral venous sinus thrombosis (CVST) is an uncommon subtype of stroke, commonly presenting with headaches, seizures and focal neurological deficits. It has higher incidence in females and young adults. We report a case of a 61 year old female who presented with headache and was diagnosed with CVST in the setting of coronavirus disease 2019 (COVID 19) infection.

CASE PRESENTATION

- A 61 year old female with a history of hypertension and depression presented with chief complaint of persistent headache for a week. This was associated with abdominal, nausea, vomiting, and dizziness. Vital signs showed BP : 122/77 mm Hg, HR : 62 bpm, RR : 17/min and saturating 95 % on room air.
- Physical exam including the complete neurological exam was unremarkable.
- Initial labs including CBC, CMP, PT/INR were within normal limits.
- CT scan of head revealed asymmetric increased density of the left distal transverse and sigmoid sinuses, raising concerns for dural sinus thrombosis.
- CT Venogram of head confirmed thrombosis of left sigmoid, transverse sinus and jugular bulb. (Figures 1 and 2)



Figure 1



Figure 2

- There was no notable prior history of cancer, deep vein thrombosis, pulmonary embolism, trauma, meningitis or recent dental infections. Medications review ruled out use of hormonal replacement therapy.
- CT abdomen pelvis performed for evaluation of abdominal pain was non revealing but showed multifocal peripheral infiltrates prompting for COVID-19 infection which returned positive by RT-PCR testing.
- She was started on a Heparin drip and eventually discharged on Warfarin. On follow up, her symptoms resolved with anticoagulation. Follow up CT venogram revealed a significant reduction of thrombus burden. (figure 3)

DISCUSSION

- COVID – 19 causes a procoagulable state and increases risk of deep vein thrombosis/pulmonary embolism. COVID-19 infection commonly presents as fever, shortness of breath, cough however can present with non specific prodromal symptoms like headache.
- Headache in setting of COVID-19 could be a manifestation of a more serious underlying disease like CVST. It is diagnosed by imaging modalities such as CT venography, CT head, MRI plus MR venography. Treatment with anticoagulation is associated with improved prognosis

CONCLUSIONS

- Our case highlights the importance of keeping a high index of suspicion for CVST in COVID-19 patients presenting with non-specific complaints like headache, especially in the right clinical context.
- Anticoagulation with heparin followed by warfarin is the standard of care for CVST treatment, and our patient had evident improvement in thrombus burden as well as symptoms post treatment.



Figure 3