

Post COVID Thrombotic Sequelae: Once Bitten, Twice Shy!

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Introduction

Long covid has been recognized as a distinct entity with thrombotic sequelae[1]. Persistent systemic vascular inflammation caused by thrombosis drives the complications associated with long COVID. The risks of arterial and venous thrombosis after COVID-19 extend well beyond the hospitalization period. Early prophylactic anticoagulation has been shown to reduce the incidence of post-covid thrombotic sequelae[2]. Some evidence suggests the use of a higher than prophylactic dose for primary venous thromboembolism prophylaxis, especially in patients with a history of venous thromboembolism (VTE)[1]. We present a case of long covid who developed recurrent thrombosis despite being on a therapeutic dose of anticoagulation.

Case Report

A 55-year-old male was brought to our Emergency Department with complaints of diffuse abdominal pain and black-coloured stools for three days. Contrast-enhanced CT abdomen (CECT) showed distal superior mesenteric artery (SMA) thrombosis and splenic infarct (Figure 1). He was treated for mild Covid-19 infection three months back. History also revealed he was hospitalized two months ago with a diagnosis of non-ST segment elevated myocardial infarction (NSTEMI) and acute ischemic stroke (Figure 2), which was managed with antiplatelets, statins and anticoagulants. He was discharged on oral anticoagulants (Tab Rivaroxaban 15 mg twice daily) for three months and was on regular follow-up. There was no history of smoking or

hypertension. Protein C, Protein S, homocysteine levels were normal. After the diagnosis of SMA thrombosis, his anti-coagulation was increased to Tab Rivaroxaban 20 mg twice daily. No further thrombotic episodes have been noted as of date.

Discussion

This case suggests that unexplained repeat thrombotic events at multiple sites may have been a consequence of Covid-19 infection. Covid-19 patients experience both arterial and venous thromboembolism[3]. Most commonly, the former presents as myocardial infarction and ischemic stroke, whereas the latter as deep venous thrombosis and pulmonary embolism. Mechanisms include changes in lung structure secondary to chronic hypoxia, persistent immune dysfunction, and endothelial damage[1]. Risks of thrombotic events after mild Covid-19 are less clear, with the need and intensity of prophylactic anti-coagulation in this subset of patients being a matter of future research[4]. Shabaka et al. have shown that patients with a history of Covid-19 infection and previous thromboembolic events were at higher risk of developing a repeat thrombotic event[5]. Physicians need to be vigilant about the thrombotic events in patients with long Covid, even in patients receiving therapeutic anti-coagulation. Such patients require more frequent monitoring for signs of thrombotic events, risk factor management, and adherence to preventive therapies[3].

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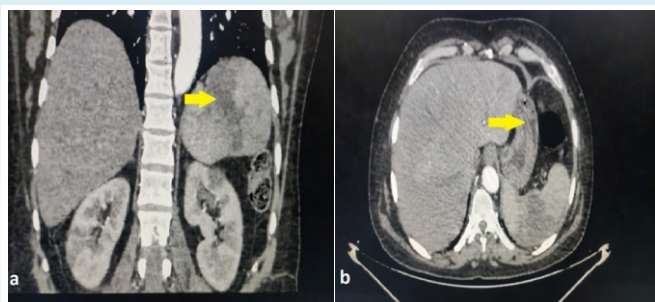


Figure 1a: Contrast-enhanced CT abdomen (coronal view) showing splenic infarct (yellow solid arrow)

Figure 1b: Contrast-enhanced CT abdomen (axial view) showing splenic infarct (yellow solid arrow)

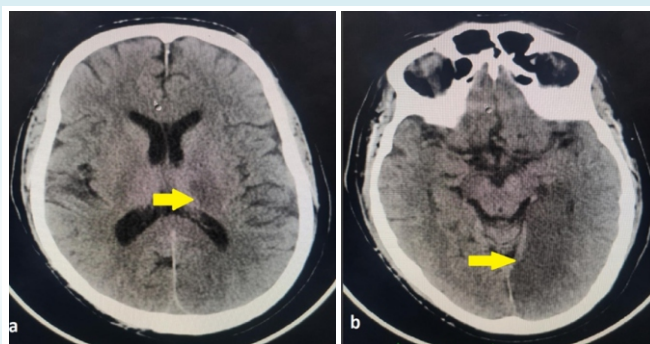


Figure 2a: Non-contrast CT Brain (axial view) showing acute infarct in posterior limb of left internal capsule (yellow solid arrow)

Figure 2b: Non-contrast CT Brain (axial view) showing acute infarct in left medial temporal lobe and left parasagittal occipital lobe (yellow solid arrow)

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

Conflict of interest: Nil **Source of support:** None

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