

Case Report

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Deep vein thrombosis as sole presentation of COVID-19 infection

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Introduction

As is the case for so many aspects of COVID-19 pandemic, information on clinical complications caused by this virus continues to emerge and evolve in real time. The majority of patients who have tested positive for COVID-19 present with symptoms of an acute respiratory illness including fever, body aches, lethargy, dry cough and breathing difficulties. However, it appears that the novel coronavirus may impact more than just the lungs, especially in severe cases.

Case presentation

A 56 years old male presented with left leg A and pain and low grade fever few days ago no history of Joint pain or swelling.

No history of cough or dyspnea or chest pain or dyspnea

No relevant symptoms in other systems

He had history of DVT few years ago with complete recovery

History of DM and hypertension

No recent history of immobility or surgery

No history of drug or illicit medication

No smoker and no history of alcohol ingestion

Physical examination

Normal viral signs

Tense swelling of left calf with tenderness

Normal systematic examination

Normal blood sugar and Renal function

Normal PT PTT and INR

Doppler ultrasound of veins showed acute DVT of left popliteal and femoral veins

Normal CBC

Increased CRP 43

Serum Ferritin 543

LDH 170

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D-dimer test 1500
Hyperglycemia RBS 260
ECG normal
Chest x-ray lung infiltrate
CT typical radiological finding of COVID-19
Pulse oxymetry 94% oxygen saturation
Put on noval oral anticoagulant(apixiban 5mg)
Antibiotic
Antiviral
Support treatment
Control of DM
Close follow up
Good response to DV

Discussion

The symptoms most commonly reported by patients affected by COVID-19 include fever, dry cough, and shortness of breath [1]. There were no typical and distinguished symptoms of COVID-19 in our patient, and the patient presented with typical symptoms of DVT, such as swelling, pain and tenderness. While he had no risk factor for DVT, laboratory tests and chest X-ray tests showed COVID-19. The most stable hemostatic abnormalities with COVID-19 include mild thrombocytopenia and increased D-dimer levels [6]. There have been reports of thrombotic disorders with organ dysfunction in patients with COVID-19 resulting in higher mortality [7] but there are few reports of DVT in patients with COVID-19. In a study by Zhou et al, a patient with COVID-19 presented with symptoms of acute cerebral infarction. After CT angiography, acute cerebral infarction and DVT in both lower limbs were confirmed [8]. In our case, DVT was suspected due to, pain, and tenderness at the leg veins, which was seen by color Doppler ultrasound in external iliac, common iliac, small saphenous, and large saphenous. Seeing this lesion on the leg, our patient was initially suspected of having thromboembolism, which, after a CT scan, revealed a person with COVID-19, with no evidence of pulmonary thromboembolism. However, in some studies, respiratory deterioration with other clinical evidence of venous thrombosis should lead to suspected pulmonary embolism (PE) [9,10]. In a study by Fu et al, [2] middle-aged patients with a history of acute ischemic stroke in middle age developed COVID-19 with neurological symptoms of acute ischemic stroke, including paralysis of the tongue, dysarthria, and weakness of the limb muscles. Despite high levels of D-dimer, they showed no signs of DVT [11], which was different from our study. Eventually, CT of the head and neck showed blockage of cerebral arteries, blockage of small vessels, and an acute ischemic stroke was confirmed [11]. In a study by Klok et al, 128 patients with COVID-19 symptoms were admitted to the intensive care unit. The cumulative incidence of thrombotic disorders was 31%. Using CT pulmonary angiogram or ultrasonogra-

phy, venous thromboembolism was detected at 27% and arterial thrombotic events at 3.7%. PE was the most common thrombotic complication (81%). DVT was also diagnosed in 3 patients. These disorders occurred after the diagnosis of COVID-19 in patients due to hospitalization [12], which was different from our patient. Also in some patients with COVID-19, nonspecific myocardial damage, renal dysfunction (leading to troponin accumulation), myocarditis, PE, and myocardial infarction type I and II due to hospitalization and, as a result, coagulation disorders were observed [7].

Conclusion

The exact mechanism of DVT formation due to COVID-19 is unknown despite thrombocytopenia and has not been investigated but it resolved as COVID-19 symptoms, tenderness, and leg pain improved. Although COVID-19 presented with DVT is a rare condition, in middle-aged people with sudden onset of manifestations, we should recognize DVT from other symptoms as an important and treatable symptom for COVID-19 diagnosis. Rapid diagnostic assays, efficient treatment, and prudent use of CT scan are important to control future COVID-19 spread.

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