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Case Report

Pectoral muscle hematoma as a complication of COVID-19 treatment: A Case Report

Yıldız OKUTURLAR[1], Damla GÜRLEYİK[2], Nur RAMOĞLU[2], Yasemin GÜNDOĞDU[1], Aylin ALTAN[3], İftihar KÖKSAL[4]

[1] Acıbadem Mehmet Ali Aydınlar University Faculty of Medicine, Department of Internal Medicine, Istanbul, Turkey
[2] Acıbadem Mehmet Ali Aydınlar University Faculty of Medicine, Istanbul, Turkey
[3] Acıbadem Mehmet Ali Aydınlar University Atakent Hospital, Department of Radiology, İstanbul, Turkey
[4] Acıbadem Mehmet Ali Aydınlar University, Atakent Hospital, Department of Internal Medicine, Department of Infectious

Abstract

In COVID-19 disease, the activation of the coagulation system is increasing. Here we presented a case of COVID-19 who developed a hematoma in the pectoral muscle possibly associated with anticoagulation therapy.

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Keywords: *COVID-19, bleeding, anticoagulation, coagulopathy*

Introduction

The newly identified coronavirus, SARS-CoV2, spread throughout the world rapidly and turned into a pandemic. The virus causes COVID-19 disease targeting the lungs leading to acute lung injury and respiratory failure if the disease progresses. It has been shown that one of the most important processes in the pathogenesis of the disease is the activation of the coagulation system. Due to the evidence, we order appropriate doses of anticoagulants to patients with COVID-19 according to their progress and test results.[1-3]

Case Report

A 70-year-old male patient with a positive COVID-19 RT-PCR test was admitted to our hospital with complaints of fatigue, fever and increasing shortness of breath. Before his admission to the hospital, he has completed 5 days of favipiravir treatment. He has a known history of hypertension and cardiac by-pass surgery. He is not a smoker. He uses captopril 25 mg, amlodipine 10 mg. On physical examination, diffuse crepitant rales were heard in the lungs. Heart sounds were normal. There was no rebound or defense in the abdominal examination; he had no edema. His

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Address for Correspondence:
Yıldız OKUTURLAR
Acıbadem Mehmet Ali Aydınlar University Faculty of Medicine, Department of Internal Medicine, Istanbul, Turkey
E-mail: y.okuturlar@gmail.com

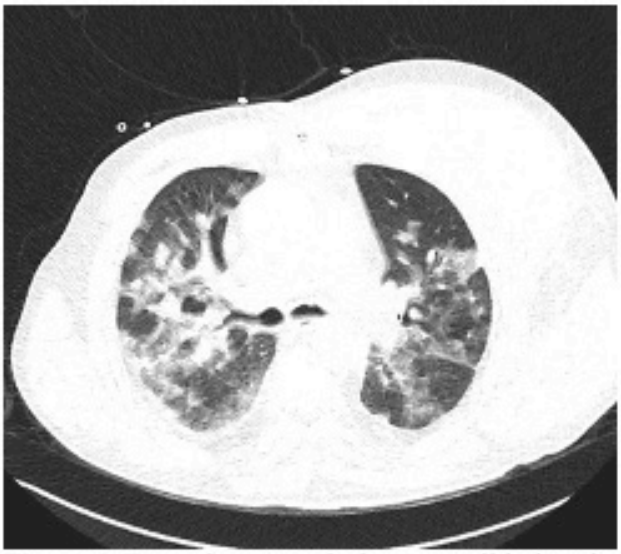

Figure 1. Extensive ground-glass consolidations in both lungs consistent with COVID-19 infection

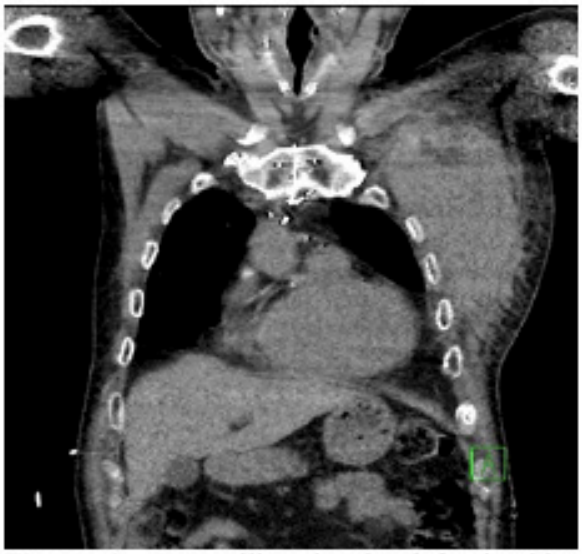

Figure 2. A swelling in the left shoulder because of 11x7 cm hematoma in the pectoralis muscle anterior to the left thorax wall

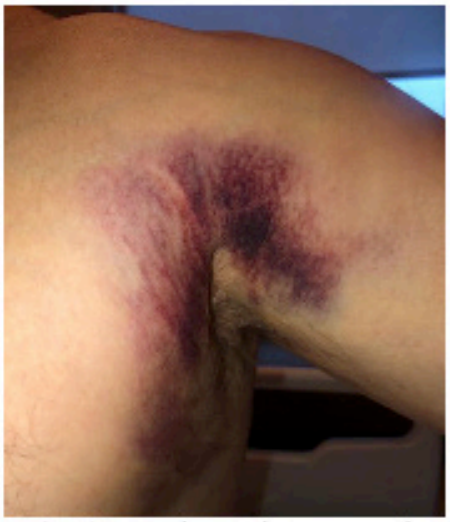

Figure 3. An ecchymosis appeared on the anterior axillary area in the second day

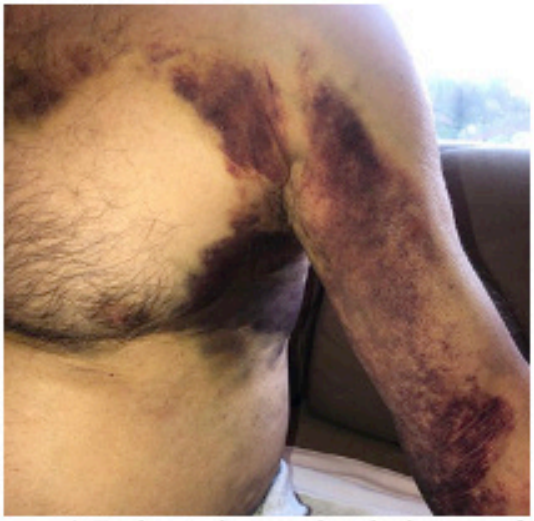

Figure 4. Ecchymosis spread to the inner surface of the arm causing stiffness in that area in the following days

weight was 78 kg. Vital findings: fever was 39.8°C, blood pressure was 128/67 mmHg, pulse was 96 beats/min, respiratory rate was 18 breathe/min. Oxygen saturation was 99% with 3 L/min oxygen support. The laboratory findings were as follows: D-dimer 4.22 ug/mL, erythrocyte sedimentation rate 67 mm/h, C-reactive protein (CRP) 18.96 mg/dL, ferritin 1544 ng/mL, fibrinogen 713 mg/dL, lactate dehydrogenase (LDH) 498 IU/L, albumin 3.10 g/dL, AST 106 IU/L, creatinine 1.92 mg/dL, glomerular filtration rate (GFR) 34.5 mL/min/1.73 m2, proBNP 1,158 pg/mL, and troponin I 0.151 ng/mL. In the CT, there were extensive ground-glass consolidations in both lungs consistent with COVID-19 infection (Figure 1). Treatment was started as favipiravir 600 mg 2x1, levofloxacin 500 mg 1x1, enoxoparin (Oksapar) 2x0.8 IU, dexamethasone 8 mg 1x1 and 1 L IV fluid. On 3rd day of his hospitalization, the patient described pain in his left chest and limitation of movement in his left arm. ECG was normal. The blood pressure was measured as 170/80 mmHg

and 50 mg of captopril was given. Perlinganit infusion was started when it was 220/130 mmHg in the follow-up. The laboratory tests were as follows: hemoglobin 8.7 g/dL, D-dimer 1.78 ug/mL, ferritin 1,109 ng/mL, fibrinogen 596 mg/dL, LDH 363 IU/L, CRP 4.47 mg/dL, AST 48 IU/L, creatinine 1.33 mg/dL, troponin I 0.060 ng/mL. All the parameters showed a decreasing trend. Only GFR increased to 53.8 mL/min/1.73 m2. In the follow-up, a swelling was recognized in the left shoulder. 11x7 cm hematoma was seen in the pectoralis muscle anterior to the left thorax wall in the thorax CT (Figure 2). Also, common ground-glass opacities and consolidated areas were evaluated as progressive. Oksapar was stopped on the 3rd day. 4 x 5 mL transamine was administered. 1 IU erythrocyte suspension was given. Codein 2x1 was added to the treatment because of hemoptysis. Two days later, an ecchymosis appeared on the anterior axillary area (Figure 3), and in the following days, it spread to the inner surface of the arm causing stiffness in that area (Figure 4). In the laboratory follow-ups, hemoglobin values were 8.0-9.0 g/dL. On the 5th day of treatment, his oxygen requirement decreased and his saturation in room air was 94%. The patient's treatment was extended to 9 days and he was discharged to come to the polyclinic control.

Discussion

Anticoagulant therapy that we are using in the treatment of COVID-19 has the adverse effect of bleeding. Therefore, the patients using anticoagulants need to be followed for a possible risk of bleeding. Especially if GFR level is low, checking anti-factor Xa levels regularly is advised. Also, creatine clearance value is very crucial in determining the correct dosage in the treatment algorithm.[3] In conclusion, anticoagulant doses should be adjusted according to anti-factor Xa and other coagulation markers. In this way, the morbidity and mortality can be decreased by reducing the risk of bleeding in patients.

Conflict of Interests

Authors declare that there are none.

Acknowledgment

This study has been presented in 17th Uludag Internal Medicine National Winter Congress, 6th Bursa Family Medicine Association National Congress, 11th Uludag Internal Medicine Nursing Congress, 5–7 March 2021, Bursa, Turkey.

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