

A COVID-19 Patient in Recovery Phase with Dyspnea Due to Acute Myocardial Infarction: A Case Report

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ARTICLE INFO	ABSTRACT
<p>Article type: Case Report</p> <hr/> <p>Article History: Received: 07-Sep-2020 Accepted: 23-Sep-2020</p> <hr/> <p>Key words: COVID-19, Dyspnea, Medical error.</p>	<p>Introduction: The mortality rate of coronavirus disease 2019 (COVID-19) has increased to more than 2-3% since it has rapidly become a pandemic. Therefore, it is aimed to prevent errors in the diagnosis and treatment of patients in case of disastrous situations.</p> <p>Case Report: A 56-year-old man was admitted to the Corona Referral Center with a chief complaint of shortness of breath. He was treated for COVID-19 at least for 10 days in this hospital. Two days following discharge from the hospital, the case was spending his recovery time at home; however, since this morning he had been suffering from severe dyspnea. He was re-admitted to the Corona Center with the probability of COVID complications. The patient electrocardiography revealed a new Left Bundle Branch Block, and he was transferred to a cardiac catheterization laboratory under isolated conditions. Moreover, percutaneous coronary intervention was performed on the left main coronary artery.</p> <p>Conclusion: There are always medical errors both in diagnosis and treatment since patient referrals to the emergency departments.</p>
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Introduction

The mortality rate of coronavirus disease 2019 (COVID-19) has increased to more than 2-3% since it has rapidly become a pandemic (1). The early clinical manifestations of the virus are mostly associated with pulmonary symptoms and often appear as fever, cough, sore throat, dyspnea, and acute respiratory distress syndrome (ARDS). Therefore, the virus can be transmitted through person to person contact and respiratory droplets (2). Rapidly moving toward acute respiratory failure, half of the patients would often develop dyspnea a week after the onset of the

disease. Elderly patients and those suffering from underlying diseases show worse prognosis than other patients (3).

It was observed that a substantial number of our patients initially presented with a combination of leukocytes and lymphopenia reduction in addition to the elevation of liver enzymes and myoglobin levels. Moreover, an increase in the levels of erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) have been mostly observed (4). The lung computed tomography (CT) scans showed interstitial lung disease changes, shadows, and patch-like in peripheral lung progressing to the pulmonary ground-glass opacities. Chest pain is the most

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common symptom in 2% of the patients (1). Therefore, it is aimed to prevent errors in the diagnosis and treatment of the patients in case of disastrous situations.

Case Report

A 56-year-old man was admitted to the Corona Referral Center with a chief complaint of shortness of breath. He was treated for COVID-19 at least 10 for days in Emam Reza Hospital. In a previous hospitalization, the patient was admitted to the emergency ward complaining of shortness of breath, fever, and frequent coughs. Due to the COVID-19 pandemic and patient typical symptoms, he was further evaluated with the possibility of this disease. The laboratory data included an ESR of 60, CRP++, lymphopenia, and positive polymerase chain reaction for COVID-19. Two days following discharge from the hospital, the patient was spending his recovery time at home; however, since this morning he had been suffering from severe dyspnea. He had no complaints of chest pain and only complained of dyspnea class *III* according to New York Heart Association. He was re-admitted to the Corona Center with the probability of COVID complications. The patient contacted his physician, and he was advised to return to the Corona Center with COVID-19 complications or exacerbation. At the time of referral, the patient vital signs included a blood pressure of 125/75 mmHg, pulse rate of 120 beats/min, respiratory rate of 28 breaths/min, saturation of 92% in room air, and body temperature of 36°C. The patient suffered from diabetes and was under treatment with insulin. Therefore, he was transferred to the COVID-19 high-risk group. A CT scan of the chest was again conducted (Figure 1).



Figure 1: Chest CT Scanning revealed peripheral Ground-glass opacities

The patient stated to have feelings, such as heaviness on the chest and shortness of breath. The patient ECG revealed Left Bundle Branch Block (LBBB); however, it was compared with the patient previous ECG, and the new LBBB was determined. Immediately after conducting patient heart consultation, he was transferred to a cardiac catheterization laboratory under isolated conditions, and percutaneous coronary intervention was carried out on the left anterior descending (LAD) artery. After 4 days, the patient was discharged from the hospital with a good general condition.

Discussion

Herein, we introduced a coronavirus-infected patient referring to Emam Reza Hospital. The COVID-19 was firstly observed in Wuhan, China, and then has rapidly spread and become a global pandemic. The World Health Organization has considered COVID-19 a global emergency. The early clinical manifestations of the virus have ranged from asymptomatic to ARDS (3).

Most clinical manifestations of the virus are associated with pulmonary symptoms and often appear as fever, cough, sore throat, dyspnea, and ARDS among which fever and cough are the most common clinical manifestations (2). Lung infections of noncoronary origin are observed in the differential diagnosis of these patients (3). In the COVID-19 pandemic, any patients complaining of shortness of breath may not have COVID-19; if other causes of dyspnea are suspected, it is necessary to perform tests for cardiac causes.

This case was hospitalized suspected of COVID-19 complication or exacerbation; however, acute myocardial infarction was confirmed for this patient. Although acute dyspnea was shown as a disease manifestation in the second week, not considering other critical diseases can lead to serious medical errors (5).

Medical errors are serious problems and lead to patient injuries. These errors may mainly occur in the intensive care unit, operating room, and emergency department (5). In 2016, after emergency assessment, diagnostic errors or delays were identified as more frequent errors in the emergency department (5). In this patient, the error

kind was quickly identified by a careful emergency medicine specialist as a delay in diagnosis; therefore, proper diagnostic and therapeutic measures were immediately performed for the patient. Underlying diseases, such as hypertension, diabetes, and underlying heart disease, accompanied by COVID-19 can increase the risk of admission to hospital (7). It is required to pay special attention to underlying diseases in these hospitalized patients, and the incidence of myocarditis should also be considered a COVID-19 complication (3).

Failure to order appropriate tests and ignorance of patient clinical findings are among the mentioned errors in this article (5). Studies have reported that traumatic patients who were incidentally diagnosed after an initial evaluation were infected with COVID-19; however, a similar condition has not been reported in poisoned patients (8).

Conclusion

Finally, there are always medical errors both in diagnosis and treatment since patient referrals to emergency departments. Nevertheless, it should be considered that taking a patient detailed medical history and physical examination can lead to provide patients with the best services and result in a reduction of medical errors.

Ethical Considerations

This case report was presented at the Regional Ethics Committee of Biomedical Research of Mashhad University of Medical Sciences, Mashhad, Iran, on 29/04/2020. Moreover, according to this committee, no contradiction with the principles of ethics in research was observed in this report.

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