



# COVID-19 Intensive Case - Presented with Pulmonary Thromboembolism

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## Abstract

Chest CT plays an important role in optimizing the management of patients with COVID-19 while also eliminating alternate diagnoses or added pathologies, particularly for acute pulmonary embolism. A few studies and isolated clinical cases of COVID-19 pneumonia with coagulopathy and pulmonary embolus have recently been published. Early recognition and treatment of immobility related complications, a significant preparation of which occur in patients who may ultimately have a good prognosis for recovery, is a fundamental component of acute critical care management.

**Keywords:** COVID-19; Coronavirus; CT; PCR

## Introduction

Chest CT plays an important role in optimizing the management of patients with COVID-19 while also eliminating alternate diagnoses or added pathologies, particularly for acute pulmonary embolism [1]. A few studies and isolated clinical cases of COVID-19 pneumonia with coagulopathy and pulmonary embolus have recently been published [2-4]. The main objective of our study was to evaluate pulmonary embolus in association with COVID-19 infection using pulmonary CT angiography. The Objective of our case report to raise awareness for possible benefits of sudden cardiac death in COVID-19 patients presenting sudden clinical worsening.

## Case Presentation

A 70-year-old female who is a known case of hypertension presented with history of attending a mass gathering, 7 days after which she started having symptoms like high grade fever, dyspnea and cough. For which she has consulted a primary physician on evaluation she was found to be in respiratory distress, hence referred to territory care center. On examination she was having high respiratory rate, her baseline saturation was 78% with bilateral extensive crepitations. Chest X-ray (Figure 1) features was suggestive of ARDS. Her nasopharyngeal and throat swab PCR was done which was positive for SARS-CoV-2. CT chest (Figure 2) shows bilateral ground glass appearance, and bilateral pleural effusion, massive pulmonary thromboembolism (Figure 3) and mild pericardial effusion with good LV function. Her D-dimer levels are high. She was treated with antibiotics, antiviral, oxygen and supportive care. During the course of hospital stay, patient's condition deteriorated and she was intubated. In spite of all these supportive measures patient expired after 2 days with sudden cardiac arrest.

## Discussion

Patients requiring hospital admission for COVID-19 pneumonia should receive prophylactic

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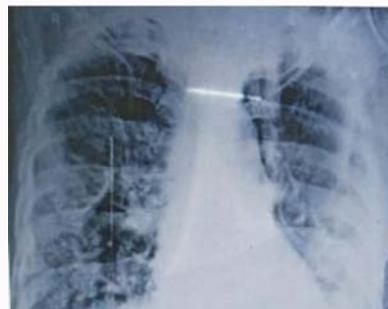


Figure 1: Chest X ray shows ARDS.



**Figure 2:** CT chest Shows bilateral ground glass appearance of SARS-CoV-2.



**Figure 3:** CTPA Shows pulmonary thromboembolism.

LMWH to prevent thromboembolism, in the absence of contraindication. Furthermore, CT has quickly become a cornerstone in both the diagnostic workup and follow-up of SARS-CoV-2 infection and is usually performed without intravenous contrast agent injection. Though, patients with known COVID-19 disease may have

acute pulmonary embolism. In the case of elevated D-dimer levels on admission or sudden clinical worsening, CT pulmonary angiography should be considered since pulmonary embolism is a life-threatening but potentially treatable condition.

## Conclusion

Early recognition and treatment of immobility related complications, a significant preparation of which occur in patients who may ultimately have a good prognosis for recovery, is a fundamental component of acute critical care management. As this patient COVID-19 was admitted for treatment and isolation, it is important to follow prophylactic measures for avoiding venous thromboembolism. In this case further respiratory deterioration with pulmonary thromboembolism is the cause of sudden cardiac arrest.

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