

The index case of COVID-19 in Northeastern Iran

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Abstract

The index case of COVID-19 in Sabzevar, Khorasan Razavi Province in northeastern Iran, was an 80-year-old man with a history of psycho-neurological illness and acute respiratory clinical symptoms, and a history of travel to areas with confirmed COVID-19 cases in Gorgan City. He was identified on February 16, 2020, and his laboratory diagnosis was made on February 26, 2020. The patient was hospitalized and discharged after complete

recovery. The contacts of the patient were traced, revealing the infection of his 30-year-old son with milder symptoms of COVID-19, which was confirmed through a laboratory test on April 4, 2020 and was recommended for home quarantine. Other family members had no signs of COVID-19.

Introduction

COVID-19 continues to spread in the world and the complications and deaths resulting from it are increasing on a daily basis [1]. By June 3rd, 2020, 6,272,098 confirmed cases were reported in 216 countries [2].

Case Report

The index case of COVID-19 in Sabzevar, Khorasan Razavi Province in northeastern Iran, was an 80-year-old man with a history of psycho-neurological illness and acute respiratory clinical symptoms, and a history of travel to areas with confirmed COVID-19 cases in Gorgan City. He was identified on February 16, 2020, and his laboratory diagnosis was made on February 26th, 2020.

The laboratory results were WBC = 9,100 cells/ μ L, RBC = 4.19×10^6 cells/ μ L, Hb = 12.9 g/dL, Hct = 38.0%, Troponin = 0 ng/mL, Plt = 232,000 cells/ μ L, and LDH = 590 U/L.

Lung scan showed several mediastinal nodes with a maximum diameter of 8 mm short axis, sometimes calcified, moderate bilateral pleural effusion, evident bilateral focal consolidation in the lower lobes, and bilateral intralobular and interlobular septal thickening more pronounced on the right side with differential diagnoses of acute hemorrhagic diarrhea syndrome (AHDS), pulmonary hemorrhage, and COVID-19 (Figure 1). A hiatal hernia was also evident. The administered medications included the following: Vancomycin 500 mg and Ribavirin 200 mg.

The patient was hospitalized and discharged after complete recovery. The contacts of the patient were traced, revealing the infection of his 30-year-old son with milder symptoms of COVID-19, which was confirmed through a laboratory test on April 4, 2020 and was recommended for home quarantine. Other family members had no signs of COVID-19.

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Conflict of interest: None declared.

Ethics approval: The present study was reviewed and approved by the Ethics Committee at Sabzevar University of Medical Sciences (Ethical cod: IR.MEDSAB.REC.1399.077).

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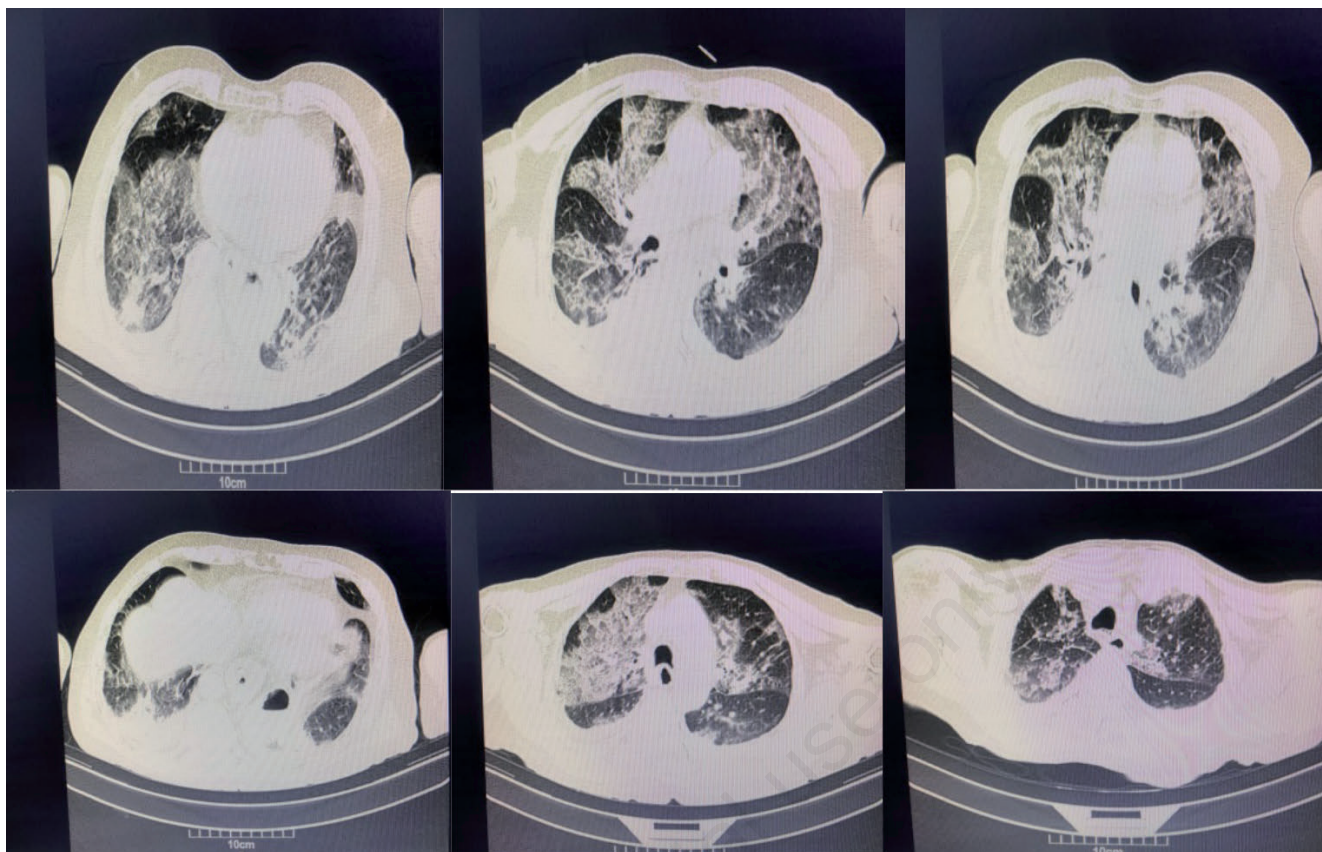


Figure 1. Chest computed tomography scans of the patient.

Discussion

The highest mortality in the world occurs at the age of 85 years and above, while the highest mortality in Iran is lower than the global average at the mean age of 68 years (56-79) [3,4]. The high mortality rate in Iran compared to other countries can be attributed to the scarcity of disinfectants and certain medications effective in the treatment of the disease [5]. The recovery of the 80-year-old patient is the highlight of this study. However, Yusufzadegan studied the death of three brothers, 54- 60- and 66-years old, with COVID-19 in Tehran (the capital of Iran), who lived separately. Patient 1, 60-year-old, was admitted with suspected shortness of breath to COVID-19 and died three days later of respiratory failure. Patient 2, 54-year-old, contracted COVID-19 one week after close contact with his brother and was hospitalized with high fever. He was treated with hydroxychloroquine plus oseltamivir. He was discharged on the fifth day of hospitalization with 87% oxygen level but died on the ninth day with respiratory failure. Patient 3, 66-year-old, contracted COVID-19 a week after close contact with patient 1. He was admitted to a hospital with suspicion of COVID-19. He progressed to severe dyspnea 1 day later and, subsequently, was transferred to the ICU. He died on the next day with acute respiratory distress syndrome. Importantly, the patients' spouses and children were not shown to be affected by COVID-19 and all of their family tests were negative. In fact, it can indicate the influence of genetic factors on COVID-19 even in people without a history of certain underlying diseases [6].

Iran's healthcare system is trying to identify new cases of the

disease by launching an electronic screening system, but majority of people have no symptoms while being carriers in whom COVID-19 may go unnoticed, which is worrying. On the other hand, due to the financial hardship, people continue business despite their illness, or they may give false answers to screening questions asked by the health staff over the phone even if they have symptoms; this makes the control of the disease difficult in Iran.

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